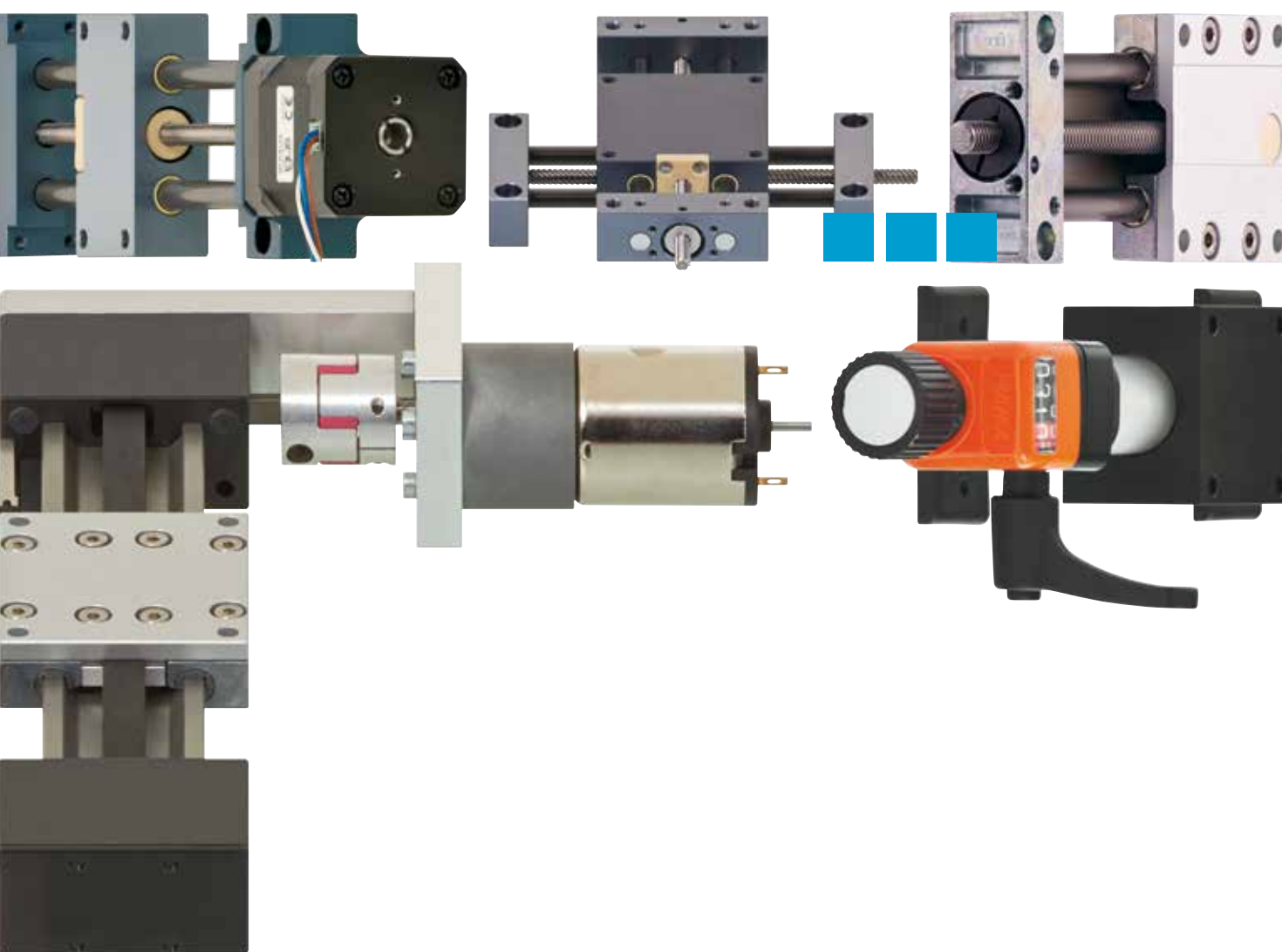


# drylin®

Drive technology



# ...plastics

## Camera/laser adjustment in labelling system

In a labelling system the camera and laser positioning are guided with two drylin® SHT/SLWE-XY XY-table units. (Co. Pago Etikettiersysteme GmbH)



## Positioning of milling heads

Aluminium dust and swarf cannot stick due to the absence of lubricants at any of the bearing points of the drylin® SHT linear module. (Berchtold GmbH)



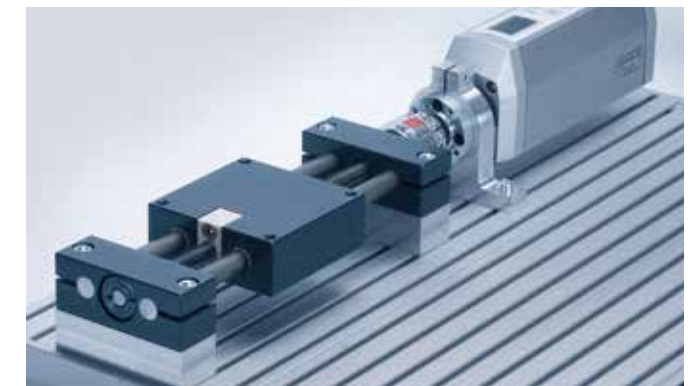
## Height adjustment of coding device

The drylin® linear module gives variable and precise adjustment, free from any maintenance or lubrication. (Filtec Europe GmbH)



## Pick and place

Quick and maintenance-free handling with drylin® toothed belt axes as a room linear robot (X, Y, Z-axis).



## Electric actuator

drylin® linear module combined with an electric actuator for use in a variety of format adjustments. (Festo AG & Co. KG)



## Adjustment of inspection camera

drylin® ZLW toothed belt axis in an inspection camera adjustment for checking the position of sealing rings. (OLPE Jena GmbH)

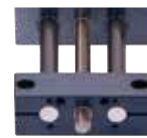


## Train ticket detection

The drylin® SLW linear module with position indicator and hand wheel adjusts the sensors which detect the edges of the train ticket and any print marks.



## drylin® drive technology – SHT linear modules



The standard:

SHT

► Page 1294



Pre-load:

SHT-PL

► Page 1295



The variable one:

SHTC

► Page 1296



The fast one with high helix thread:

SHTS

► Page 1297

## drylin® drive technology – SHT linear modules



With ball bearing supported lead screw:

SHT-BB

► Page 1298



The standard: stainless steel

SHT-ESJ

► Page 1300



Hygienic design:

SHTC-HYD

► Page 1301



With quick-release mechanism:

SHTC-FF

► Page 1302

## SHT linear modules



With quick-release mechanism:

SHT-FF

► Page 1303



XY-table:

SHT-XY

► Page 1304



The compact one:

SLW

► Page 1310



Pre-load:

SLWE-PL

► Page 1311

## SLW linear modules



With ball bearing supported lead screws:

SLEW-BB

► Page 1312



The fast one with high helix thread:

SLWS

► Page 1313



With protected lead screw:

SLW-PT

► Page 1314



Dual action linear system:

SLWT

► Page 1315

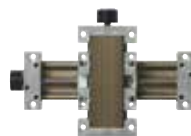
## SLW linear modules



Stainless steel version:

SLW-ES

► Page 1316



XY-tables:

SLW-XY

► Page 1318



XY-tables – stainless steel version:

SLW-XY-ES

► Page 1319

## SAW linear modules



Robust design:

SAW

► Page 1324



Direct drive in short design:

SAWC

► Page 1325



With motor available from stock:

DLE-SA

► Page 1326

## easytube linear unit



Single tube linear unit easytube:

SET

► Page 1330



easytube with double flange:

SET-F

► Page 1331



easytube with single flange:

SETB

► Page 1332



easytube with measurement scale:

SETM-SC

► Page 1333



easytube „light“:

SETC

► Page 1334



Ball bearing supported lead screws based on drylin® T:

SLT-BB

► Page 1337

## Miniature linear modules



Pre-load miniature linear module:

SLN-27

► Page 1341



Prism module for precise adjustment:

SLNV

► Page 1342

## ZLW toothed belt axes



Standard toothed belt axes:

ZLW

► Page 1354



Modular toothed belt axes

ZLW-AL/-ES

► Page 1356



Opposite drive toothed belt axes:

ZLW-OD

► Page 1358

## econ entry-level series



The SLW entry-level model:  
SLWP-E  
► Page 1364



The SLT entry-level model:  
SLTP-E  
► Page 1365



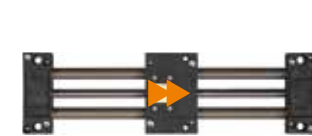
The SHT miniature version:  
SHTP-AWM  
► Page 1366



The lightweight entry-level model:  
SHTP  
► Page 1367



The cost-effective SHT version:  
SHTP-AWM  
► Page 1368



With quick-release mechanism:  
SHTP-AWM-FF  
► Page 1368



Miniature linear modules:  
SLN basic  
► Page 1370



Cost-effective toothed belt axis:  
ZLW-E  
► Page 1371

## econ entry-level series



Flat linear robot:  
DLE-FG  
► Page 1372



With motor, from stock  
► Page 1373

## drylin® E electric drive technology

## drylin® general drive technology – accessories



Angular drives, flexible positioning  
► Page 1422



Angular drive for heavy duty  
► Page 1423



Hygienic design angular drive  
► Page 1423



Position indicator  
► Page 1424

## drylin® general drive technology – accessories



Lead screw clamps  
► Page 1425



Hand wheel  
► Page 1426



Flexshafts  
► Page 1427



Flexshaft incl. remote control unit  
SHT-ROU  
► Page 1428

## drylin® electric drive technology – accessories



Stepper motors  
► Page 1432



DC motors with spur gear  
► Page 1436



Protective cover for DC motors  
► Page 1437



Couplings  
► Page 1440

## drylin® electric drive technology – accessories



Motor flanges  
► Page 1441



Cables for stepper motors  
► Page 1442



Proximity switches: Limit and reference switches  
► Page 1443



Spacer for height adjustment:  
SLW/SHT linear modules  
► Page 1444



Mounting bracket  
► Page 1445



Adapter kit for linear robot setup  
► Page 1446



T-slot plate  
► Page 1447



Slot nuts for mounting  
► Page 1448

## drylin® electric drive technology – accessories



Clamps  
► Page 1449



Adapter plate  
► Page 1450



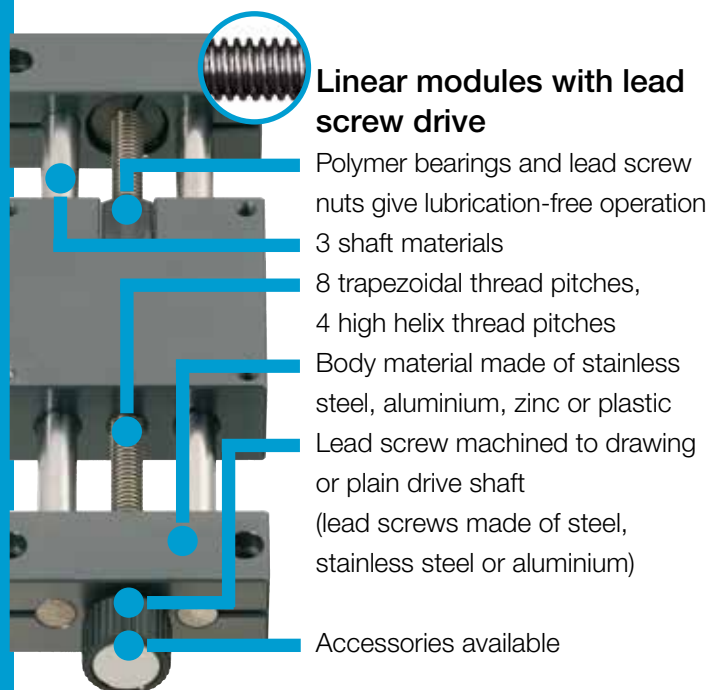
Stainless steel angle kit  
► Page 1451




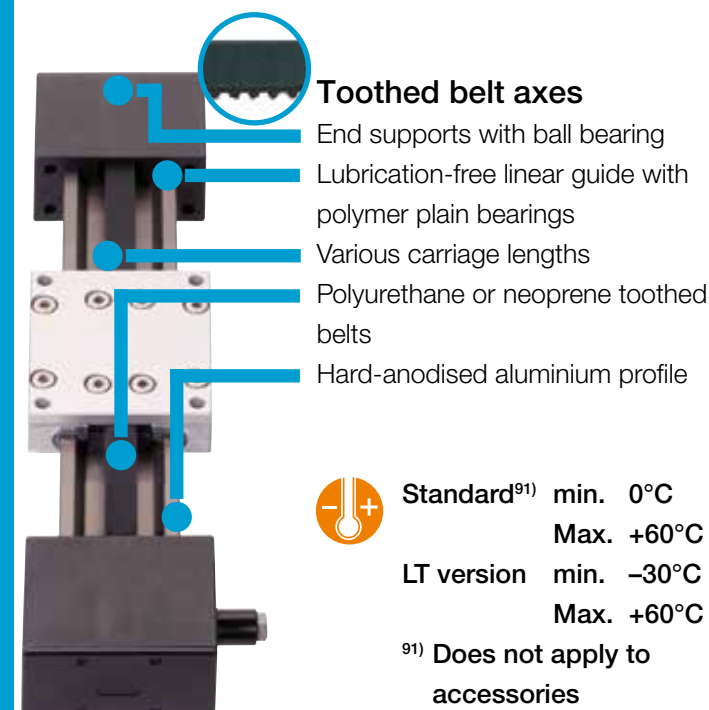
Accessories for linear robot drives  
► Page 1452




The drylin® product portfolio provides lubrication-free linear modules that are driven either by a trapezoidal thread, high helix thread or toothed belt. The user can choose a suitable individual solution from lightweight solid plastic units up to heavy-duty stainless steel solutions. In all systems, the stroke length is freely selectable and the drive given either via hand wheel or motor.



 **Standard** min. 0°C  
Max. +60°C  
**Stainless steel version  
with iglidur® X**  
Min. 0°C  
Max. +180°C



 **Standard<sup>91)</sup>** min. 0°C  
Max. +60°C  
**LT version** min. -30°C  
Max. +60°C  
<sup>91)</sup> Does not apply to accessories



## When to use it?

- For format adjustments
- In extreme environments
- When a cost-effective, ready-to-fit solution is required
- When corrosion resistance is required
- When a quiet operation is required



## When not to use it?

- When high loads need to travel at highly dynamic forces
- When positioning accuracy <0.1mm is required
- When high running performance is required in continuous operation



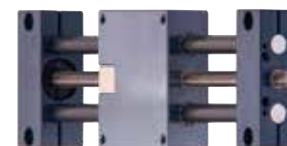
## When to use it?

- Fast positioning of small loads
- Quiet operation
- Slim design
- Underwater use with UW belt
- Cost-effective solution as basic version
- Continuous operation



## When not to use it?

- When high loads need to travel at highly dynamic forces
- When positioning accuracy <0.1mm is required



## SHT linear modules

- Drive: Trapezoidal or high-helix lead screw
- Ball-bearing mounted lead screw drives for higher dynamic forces
- Carriage in either quad block or compact design

► Page 1291



## SAW linear modules

- Drive: ball bearing supported lead screw
- Rail profile in high design
- Extremely torsion-resistant

► Page 1321



## SLT linear modules

- Variable pitch
- Adjustable drylin® T miniature carriage
- Lead screw arrangement can be selected either left or right

► Page 1335



## ZLW toothed belt axes

- Versions basic, standard and econ
- For fast positioning
- End supports with ball bearing

► Page 1343



## drylin® E - electric drive technology

- Lubrication-free linear modules with motor
- Ready to install with motor, cable and initiator
- Drive: Lead screw, toothed belt or rack

► Page 1373



## SLW linear modules

- Based on drylin® W
- Drive: Trapezoidal or high-helix lead screw
- Torsion-resistant double shaft systems

► Page 1307



## SET easytube linear modules

- Corrosion-resistant
- Lightweight due to aluminium and plastic
- Simple, smooth design, protected lead screw

► Page 1327



## SLN miniature linear modules

- Based on drylin® N, low installation height
- Basic, adjustable and pre-load versions

► Page 1339



## econ entry-level series

- Lightweight
- Cost-effective
- Corrosion-resistant

► Page 1361



## Cantilever axis GRW

- Dynamic force transmission through rack
- Assembly option for limit and reference switch

► Page 1410

## Accessories for linear modules

- Position indicator, hand wheels, lead screw clamps, angular drives and more

► Page 1419

Linear modules						
Linear module	Shaft Ø [mm]	Thread	Pitch	Lead screw Self-locking	Carriage length [mm]	Compatible with drylin® E
SHT-08	8	Tr	06x2	+	35/65	+
		Sg	6.35x12.7	-		
SHT-12	12	Tr	10x2	+	30/85	+
	12	Sg	10x12	-		
	12	Sg	10x50	-		
SHT-20	20	Tr	18x4	+	36/130	+
	20	Tr	18x8	+		
	20	Sg	18x100	-		
SHT-30	30	Tr	24x5	+	50/180	+
SHTC-40	40	Tr	26x5	+	70	+
SHTC-50	50	Tr	30x6	+	80	+
SLW-0630	□5	M	M8x1.25	+	60/100	+ <sup>121)</sup>
	5	Tr	08x1.5	+		
	5	Sg	08x15	-		
SLW-1040	10	Tr	10x2	+	69/100/150/200	+ <sup>121)</sup>
SLW-1080	10	Sg	10x12	-		
SLW-10120	10	Sg	10x50	-		
SLW-1660	16	Tr	14x4	+	100/150/200	+
SLW-2080	20	Tr	18x4	+	150/200/250	+
	20	Tr	18x8	+		
	20	Sg	18x100	-		
SLW-25120	25	Tr	24x5	+	150/200/250	+
SAW-0630	□5	Tr	08x1.5	+	60/100	+
	5	Sg	08x15	-		
SAW-1040	10	Tr	10x2	+	69/100/150	+
	10	Sg	10x12	-		10
	10	Sg	10x50	-		10
SAW-1080	10	Tr	12x3	+	100	+
	10	Sg	12x6	-		10
	10	Sg	12x25	-		10
SAW-1660	16	Tr	14x4	+	100/150/200	+
SLT-0412	5	Tr	08x1.5	+	38	+
	5	Sg	08x15	-		
SLT-0415	10	Tr	12x3	+	45	+
	10	Sg	12x6	-		10
	10	Sg	12x25	-		10
SLN-27	27	M	M5x0.8	+	35	+
	10	Sg	5x5	-		10
SHTP-01-06	6	M	M8x1.25	+	45	-
SHTP-01-10	10	Tr	06x2	+	36	-
SHTP-01-12	12	Tr	10x2	+	55	-
SHTP-02-12						
SET-12	12	M	M4x0.7	+	45	-
SET-25	25	Tr	10x2	+	36	-
SET-30	30	Tr	12x3	+	55	-

<sup>120)</sup> When configuring your linear module, we ask that you note the igus® specifications for maximum stroke lengths. The performance and load specifications shown above for all drive units are based exclusively on stroke lengths within the recommended values. Exceeding these can result in undesirable effects to the function such as increased wear and noise. Belt or lead screw contact cannot be excluded, and the rated performance and load specifications may not be attainable.

Lead screw with plain bearing support <sup>121)</sup>						Ball bearing supported lead screws					Technical options (Pages 1286+1287)	Page
Max. stroke length <sup>120)</sup> [mm]	Max. static, axial load capacity [N]	Max. static, radial load capacity [N]	Max. speed [rpm]	Max. feed [m/min.]		Max. stroke length <sup>120)</sup> [mm]	Max. stat. axial [N]	Max. stat. radial [N]	Max. speed [rpm]	Max. feed [m/min.]		
-	-	-	-	-		300	100	400	1,000	2.0	ZB	1298
-	-	-	-	-		300	25	100	600	7.6	ZB	1298
750	700	2,800	100	0.2		500	350	1,400	1500	3.0	PL	1295
750	100	400	100	1.2		500	100	400	400	4.8	ZB	1294
750	100	400	100	5.0		500	100	400	200	10.0	ZB	1294
1,000	1,600	6,400	100	0.4		900	1,000	4,000	1,500	6.0	PL	1294
1,000	500	2,000	100	0.8		900	500	2,000	1,000	8.0	PL	1294
1,000	400	1600	100	10.0		900	400	1,600	200	20.0	-	1294
1,250	2,500	10,000	100	0.5		1,000	1,500	6,000	1,200	6.0	PL	1294
1,500	4,000	16,000	100	0.5		-	-	-	-	-	-	1296
1,500	6,250	25,000	100	0.6		-	-	-	-	-	-	1296
300	50	200	100	0.1							-	1310
300	100	400	100	0.2		300	100	400	1,000	1.5	-	1310
300	50	200	100	1.5		300	50	200	600	9.0	-	1310
750	700	2,800	100	0.2		500	350	1,400	1,500	3.0	TTF/PL	1310
750	100	400	100	1.2		500	100	400	400	4.8	TTF/PL	1310
750	100	400	100	5.0		500	100	400	200	10.0	TTF/PL	1310
750	1,200	4800	100	0.4		750	700	2,800	1,500	6.0	TTF/PL	1310
1,000	1,600	6400	100	0.4		900	1,000	4,000	1,500	6.0	TTF/PL	1310
1,000	500	2,000	100	0.8		900	500	2,000	1,000	8.0	TTF/PL	1310
1,000	400	1,600	100	10.0		900	400	1600	200	20.0	TTF/PL	1310
1,250	2,500	10,000	100	0.5		1,000	1,500	6,000	1,200	6.0	-	1310
-	-	-	-	-		300	100	400	1,000	1.5	-	1324
-	-	-	-	-		300	50	100	600	9.0	-	1324
-	-	-	-	-		500	500	2,000	1,500	3.0	TTF/PL	1324
-	-	-	-	-		500	100	400	400	4.8	TTF/PL	1324
-	-	-	-	-		500	100	400	200	10.0	TTF/PL	1324
-	-	-	-	-		750	750	3,000	1,500	4.5	TTF/PL	1324
-	-	-	-	-		750	400	400	1,000	6.0	TTF/PL	1324
-	-	-	-	-		750	200	400	300	7.5	TTF/PL	1324
-	-	-	-	-		750	750	3,000	1,500	6.0	TTF/PL	1324
-	-	-	-	-		300	100	400	1,000	1.5	-	1337
-	-	-	-	-		300	25	100	600	9.0	-	1337
-	-	-	-	-		600	200	800	1,500	4.5	-	1337
-	-	-	-	-		600	100	400	1,000	6.0	-	1337
-	-	-	-	-		600	50	200	300	7.5	-	1337
250	10	40	100	0.1		250	10	40	250	0.2	-	1370
250	10	40	100	0.5		250	10	40	500	2.5	-	1370
300	50	200	100	0.1		-	-	-	-	-	-	1366
350	100	400	100	0.2		-	-	-	-	-	-	1367
500	200	800	100	0.2		-	-	-	-	-	-	1368
200	10	40	100	0.1		-	-	-	-	-	-	1330
750	150	600	100	0.2		-	-	-	-	-	-	1330
850	200	800	100	0.3		-	-	-	-	-	-	1330

<sup>121)</sup> Linear modules on plain bearings require an aluminium shaft end support when connected to a motor. The technical values in the specifications are maximum values for each criterion, e.g. speed, stroke length etc.; they are not cumulative values. Suitability under consideration of the individual parameters for usage can be checked online at [www.igus.eu/linearmodule-finder](http://www.igus.eu/linearmodule-finder).



# drylin® drive technology | Technical options

In addition to the standard configurations, drylin® drives offer numerous solutions for the many requirements of different applications.

The following options can be configured online with the SHT configurator:  
[www.igus.eu/sht-configurator](http://www.igus.eu/sht-configurator)

## Pre-load (PL)

The axial pre-load reduces the backlash of the system. Positioning and repeatability can be optimised. The required drive torque increases only slightly.



For SHT, SLW and SAW linear modules

## Zero-backlash (ZB)

Self-adjusting zero-backlash lead screw nuts are available for SHT modules in sizes 08 and 12. For movements that require repeatability and which are implemented through high helix thread, the ZB function provides a minimal lifelong backlash.



## Linear modules with ball-bearing mounted lead screw

The SHT and SLW linear modules with ball bearing supported lead screws give reduced vibration, and increased dynamic capability. These are also suitable for applications with motor drives.



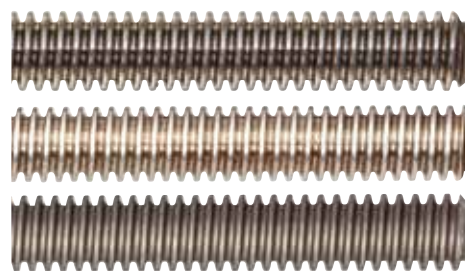
## Shaft materials

When using linear modules of the SHT series, you can choose a shaft material from steel, stainless steel, or hard-anodised aluminium (standard). The short delivery time and excellent coefficient of friction and wear make the aluminium version the most common choice.



## Lead screw materials

All drylin® linear modules can be delivered with self-locking trapezoidal steel and stainless steel lead screws; upon request, these can also be made from hard-anodised aluminium. The SHT and SLW series can also be configured with stainless steel high helix lead screws. This allows for much higher pitches and drive speeds, but without the self-locking feature.



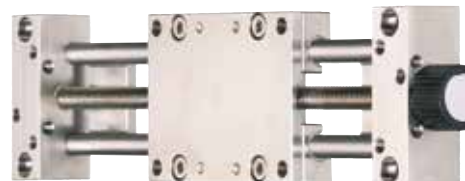
## Bearing materials

The bearing surfaces of the drylin® drive units are equipped with lubrication and maintenance-free igus® high performance polymers. Options include materials for high temperature application up to +180°C (iglidur® X, SHT-ES series), and also for FDA-compliant environments (iglidur® A180).



## Complete solutions made of stainless steel

The use of AISI 316Ti and AISI 304 makes of the guides resistant to seawater and chemical contact corrosion. The guide shafts are also made from AISI 316Ti.



# drylin® drive technology | Technical options

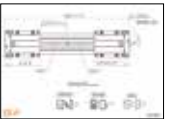
## Linear modules with several carriages

All drylin® linear modules can be configured with multiple carriages. The short carriages from the SHTC series are ideally suited for this. The second (or additional) carriage can be installed as a freely moving unit without lead screw, or as a fixed unit with its own trapezoidal lead screw nut.



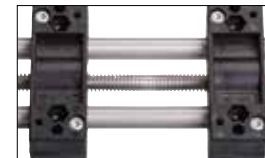
Online customer drawing

► [www.igus.eu/customerdrawing](http://www.igus.eu/customerdrawing)



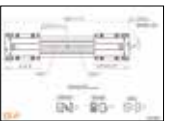
## Right/left opposite drive

In addition to the standard right-handed lead screws, left-hand lead screws and opposite drive lead screws can also be used. This option often used in format adjustments can be specified for all diameters and types. Also available as a multi-carriage system or with right/left opposite drive.



Online customer drawing

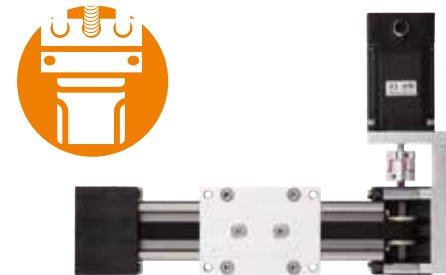
► [www.igus.eu/customerdrawing](http://www.igus.eu/customerdrawing)



## Linear axes with motor: [www.igus.eu/drylinE-finder](http://www.igus.eu/drylinE-finder)

## Linear modules with motor

Several drylin® drive units are compatible with the drylin® E modular kit. As linear axes, they can be easily and quickly configured directly to the matching igus® stepper motors, power cables and proximity switches – assembled and tested from one source.



## More options:

## Adjustable radial clearance

The "turn to fit" feature allows individual clearance adjustment by hand. The adjustment is done in 0.01-mm increments and cannot be triggered unintentionally during the operation (SLW series 10-20).



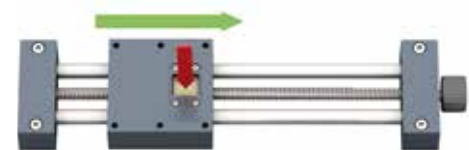
For SLW and SAW linear modules



For SHT linear modules

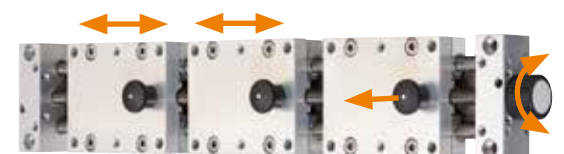
## Fast Forward (FF)

SHT linear modules and SHTP plastic linear modules with quick-release mechanism offer a combination of accurate positioning and fast manual adjustment.



## drylin® SLW "Stop and Go"

This additional function for linear carriages enables the use of an unlimited number of carriages on one guide – controlled by only one lead screw. The connection to the lead screw is engaged or released via the button.



## XY-tables

The SHT and SLW linear modules can also be configured as XY-tables. XY adjustments can therefore be given with a single unit.

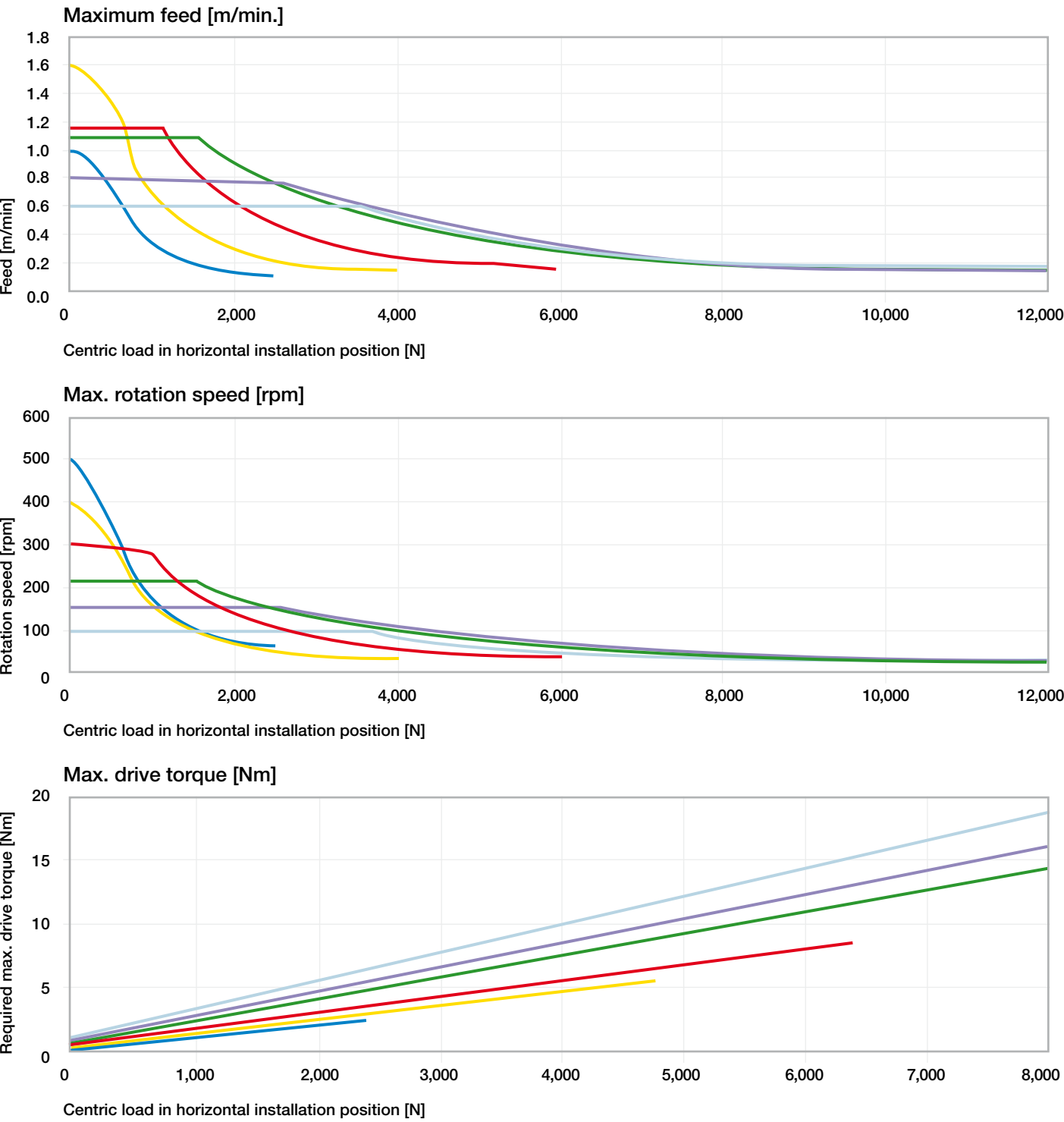


# drylin® drive technology | Design and calculation

drylin® linear modules have been developed for position settings of all types. The linear setting is achieved by means of trapezoidal lead screws that can be operated manually or by motor. The maximum linear continuous speed is 1.6m/min depending on thread pitch and load. The suitability of the lead screw linear units for an application can be checked using the graphs below.



## HORIZONTAL



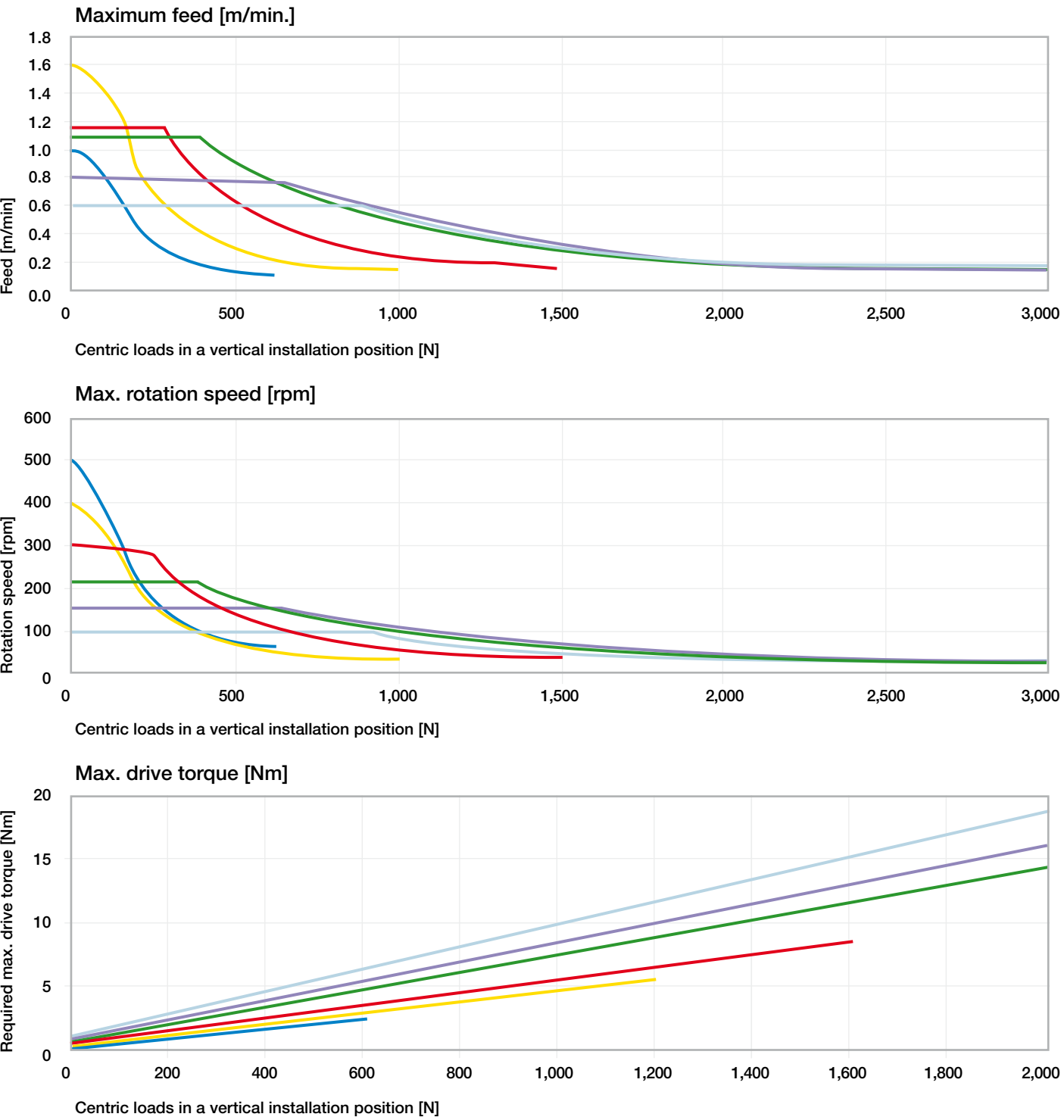
# drylin® drive technology | Design and calculation

The following trapezoidal lead screw drive sizes are used in SHT, SLW and SET linear modules:

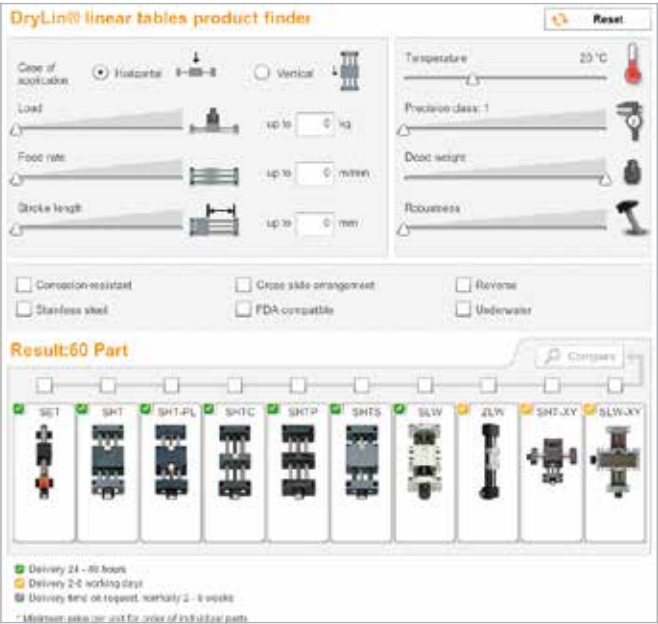
- Tr10x2: SHT-12, SHTC-12, SHTP-12, SLW-1040, SLW-1080, SLW-1040-ES, SET-25
- Tr14x4: SLW-1660
- Tr18x4: SHT-20, SHTC-20, SLW-2080
- Tr24x5: SHT-30, SHTC-30, SLW-25120
- Tr26x5: SHTC-40
- Tr30x6: SHTC-50



## VERTICAL





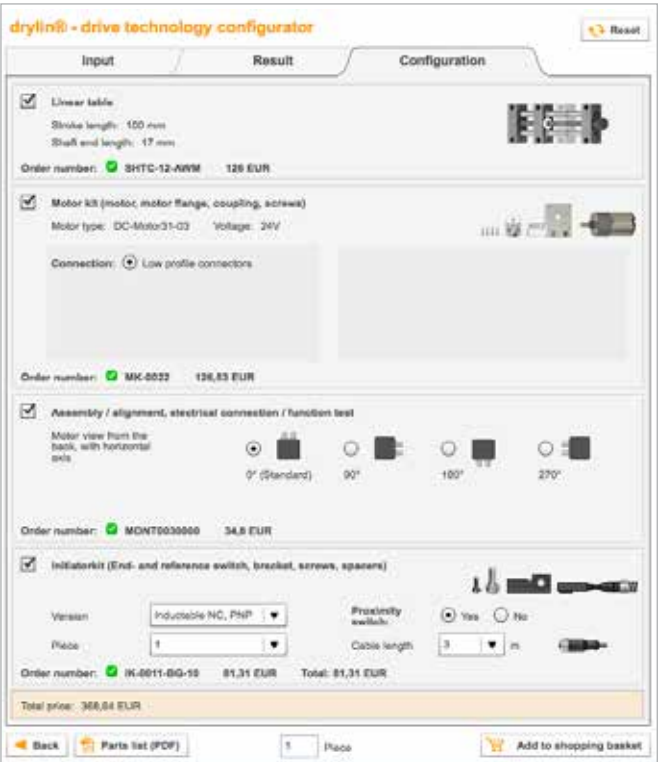


**Complete drive technology configurable with or without motor**

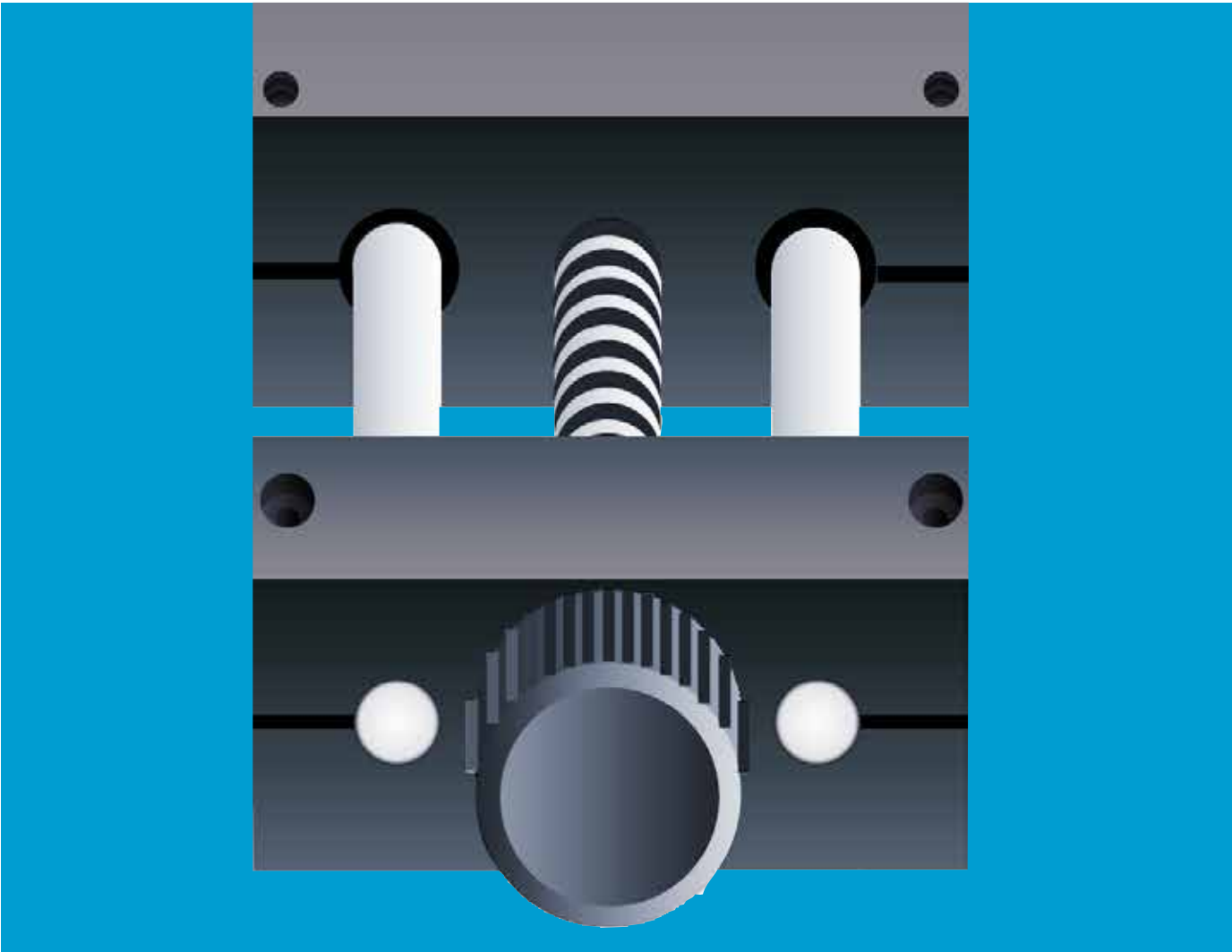
After you have selected your application parameters, the product finder shows an overview of the linear systems and the motors that are suitable. The product finder calculates the individual price of the linear axis as well as the utilisation rate of the motors and the service life in strokes. With just a few clicks, you can put together a complete linear axis incl. motor, connection cables and built-on parts.



► [www.igus.eu/linearmodule-configurator](http://www.igus.eu/linearmodule-configurator)



Type	Drive	Installation	Stroke	Stroke	Features	Vmax	Open	Open	Total
			mm	mm		mm/s	mm	mm	price from EUR
SHT-P	10x2	12	Aluminum	100	1	0.2	180	0.1	48.80
SHT-P	10x2	12	Aluminum	100	1	0.2	180	0.1	48.80
SET	10x2	12	Plastic	100	1	0.2	180	0.1	40.80
SHT-P	10x2	12	Aluminum	100	1	0.2	180	0.1	48.80
SET	10x2	12	Plastic	100	1	0.2	180	0.1	40.80
SET-F	10x2	12	Plastic	100	1	0.2	180	0.1	40.80
SLW	5x1.5	6	Aluminum	100	2	0.2	180	0.1	98.80
SLW	10x2	12	Aluminum	100	2	0.2	180	0.1	118.80
SET-F	12x3	30	Plastic	100	1	0.3	100	0.15	120.00
SET	12x3	30	Plastic	100	1	0.3	100	0.15	120.00



# drylin® general drive technology – SHT linear modules

- Drive: Trapezoidal or high-helix lead screw
- Ball-bearing mounted lead screw drives for higher dynamic forces
- Lead screws made from steel, stainless steel or aluminium
- Carriage in either quad block or compact design
- Configure online



Basic parts (shaft end supports/carriages) are made from machined aluminium with anodised surfaces or from stainless steel

Drive: self-locking trapezoidal thread or fast adjust high helix thread

Bearing elements/lead screw nut made from lubrication-free iglidur® polymers

Carriages in long or short "compact" design

Shaft material: Aluminium, steel or stainless steel

Lead screw material: steel or stainless steel, plain or ball bearings

For manual adjustments, large range of accessories available ► **Page 1419**

Configurable with motor as a ready-to-install linear drive (drylin® E ► **Page 1373**)

## Lubrication-free linear modules – drylin® SHT

The drylin® SHT linear modules can be moved lubrication-free, while also offering high precision and robust components. The units can be individually configured with various shaft and lead screw materials, carriage lengths and additional functions. The SHT series is suitable for manual and motorised operation and is supplied ready for connection with drylin® E motors.

- All bearing positions are completely lubrication-free due to the use of iglidur® high performance polymers
- Freely selectable stroke lengths
- High temperature version available
- SHT linear modules can be configured as a multi-carriage system or with right/left opposite drive

### Typical application areas

- Format adjustment
- Actuators
- Sensor adjustment
- Marking and engraving technology
- Laboratory equipment



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



### Carriage lengths: 30-180 mm

Pitch: 2-100mm/rotation

Stroke lengths: up to 1,500mm



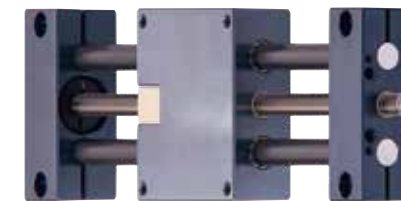
### Product finder

► [www.igus.eu/sht-productfinder](http://www.igus.eu/sht-productfinder)



### Configure SHT modules quickly and easily online

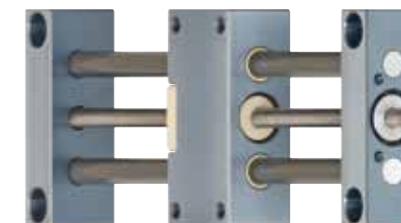
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)



### SHT linear module – standard

- Solid design
- Three different sizes
- Various materials for shaft and lead screw
- Maintenance-free and optionally corrosion-resistant

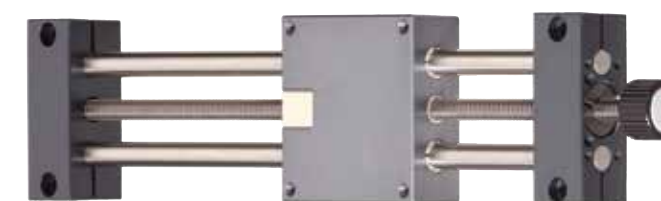
► **Page 1294**



### SHTC linear module – variable

- Design flexibility due to short carriages
- Ideal for 2 carriages
- 5 sizes from Ø 12 up to 50mm

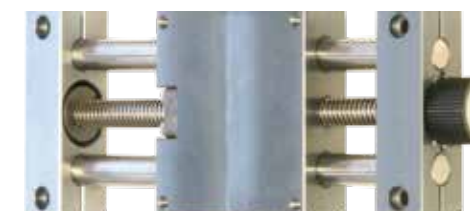
► **Page 1296**



### SHT-BB linear module – ball-bearing supported

- Higher rotation speed and higher precision
- Belt drive permits radial loads
- Constant drive torque
- Less axial clearance

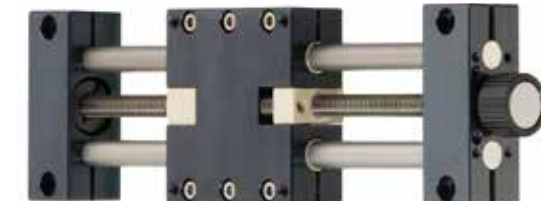
► **Page 1298**



### SHT linear module made from stainless steel

- All components (shaft end supports, carriages, shafts, lead screws) made of corrosion-resistant stainless steel
- Select bearings from three different iglidur® materials

► **Page 1300**



### SHT-PL linear module, pre-load

- Pre-loaded trapezoidal lead screw nuts, pre-load force: 50N
- Manually and continuously adjustable radial clearance
- Lightweight due to aluminium and plastic

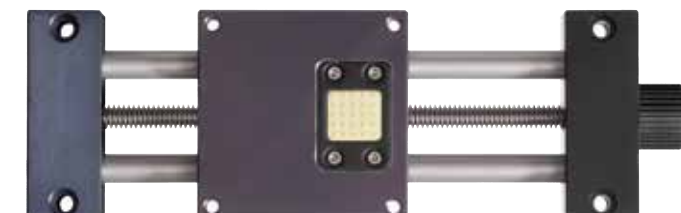
► **Page 1295**



### SHTS linear module – the fast one

- With high helix lead screw
- High-speed solution for fast positioning
- Up to 100mm travel/rotation

► **Page 1297**



### SHT-FF linear module – "Fast-Forward"

- With quick-release mechanism
- Precise and fast positioning
- Including self-locking brake
- Only recommended for horizontal applications

► **Page 1302**



### XY-tables

- XY-tables standard and pre-load

► **Page 1304**





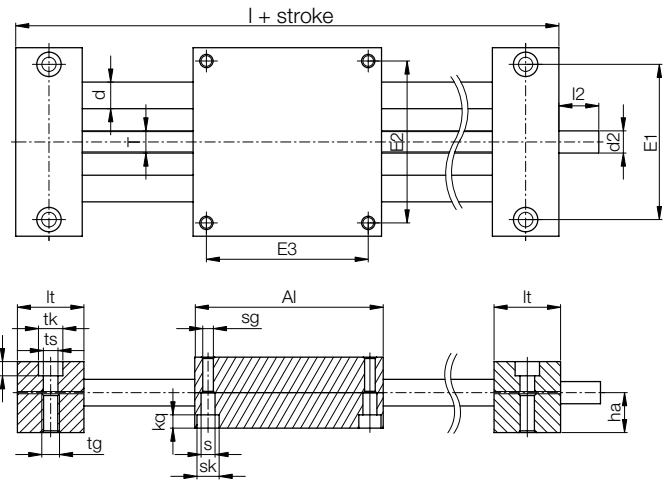
- Solid design
- Various materials for shaft and lead screw
- Maintenance-free and optionally corrosion-resistant
- TR10x2, TR18x4, TR24x5
- Temperature-resistant up to +60°C
- Available accessories  
► **Page 1419**
- Lead screw nuts are available separately ► **Page 1262**
- Available with motor  
► **Page 1373**



**Order key**  
complete solution ► **Page 1306**

### SHT-12-AWM

- Shaft material
- Installation size
- Standard



**Configure online**  
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)

#### Technical data

Part No.	Max. stroke length	Aluminium shaft		Steel shaft		Max. static load capacity	
		Weight	Additional (per 100mm)	Weight	Additional (per 100mm)		
	[mm]	[kg]	[kg]	[kg]	[kg]	axial [N]	radial [N]
SHT-08-AWM	300	0.24	0.05	0.27	0.1	100	360
SHT-12-AWM	750	1.1	0.1	1.3	0.2	700	2,800
SHT-20-AWM	1,000	3.2	0.3	3.9	0.6	1,600	6,400
SHT-30-AWM	1,250	8.6	0.6	10.9	1.4	2,500	10,000

#### Dimensions [mm]

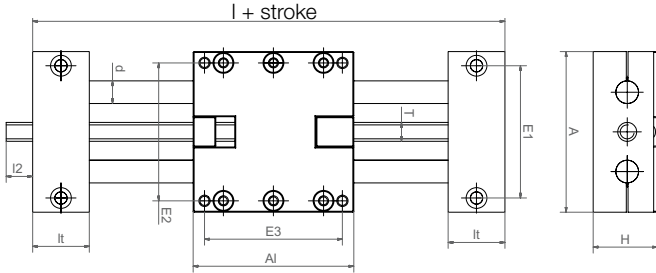
Part No.	A	AI	H	E1	E2	E3	I	R	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15						
SHT-08-AWM	65	65	23	52	55	55	96	32	1.5	15.5	10	5.5
SHT-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-30-AWM	180	180	68	150	158	158	280	96	4	50	20	13.5

Part No.	tg	kt	s	sk	sg	kq	d	T	I2	d2	ha
	±0.1									Standard	
SHT-08-AWM	M6	7	4.2	8	M5	4.6	8	Tr6x2	17	Tr6x2	13
SHT-12-AWM	M8	6.4	6.3	10	M6	6.0	12	Tr10x2 <sup>157)</sup>	17	Tr10x2 <sup>92) 157)</sup>	18
SHT-20-AWM	M10	8.6	6.4	11	M8	7.0	20	Tr18x4	26	12h9	23
SHT-30-AWM	M16	12.6	11.0	18	M12	10.6	30	Tr24x5	38	14h9	36

<sup>92)</sup> Lead screw end unmachined; <sup>157)</sup> Also available with with Tr10x3



Pre-loaded trapezoidal lead screw nut

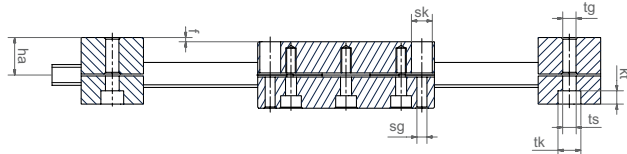


**Order key**  
complete solution ► **Page 1306**

### SHT-12-AWM-PL

- Clearance-free, pre-loaded
- Shaft material
- Installation size
- Standard

- Pre-loaded trapezoidal lead screw nuts, pre-load force: 50N
- Manually and continuously adjustable radial clearance
- Lightweight due to aluminium and plastic
- Lead screw end unmachined
- Temperature-resistant up to +60°C
- Available accessories ► **Page 1419**
- Lead screw nuts are available separately ► **Page 1262**
- Available with motor ► **Page 1373**



**Configure online**  
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)

#### Technical data

Part No.	Max. stroke length	Aluminium shaft		Steel shaft		Max. static load capacity	
		Weight	Additional (per 100mm)	Weight	Additional (per 100mm)		
	[mm]	[kg]	[kg]	[kg]	[kg]	axial [N]	radial [N]
SHT-12-AWM-PL	750	1.1	0.1	1.3	0.2	700	2,800
SHT-20-AWM-PL	1,000	3.2	0.3	3.9	0.6	1,600	6,400
SHT-30-AWM-PL	1,250	8.6	0.6	10.9	1.4	2,500	10,000

#### Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	I	R	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15						
SHT-12-AWM-PL	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-20-AWM-PL	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-30-AWM-PL	180	180	68	150	158	158	280	96	4	50	20	13.5

Part No.	tg	kt	sk	sg	d	T	I2	d2	ha
		±0.1						Standard	
SHT-12-AWM-PL	M8	6.4	10	M6	12	Tr10x2 <sup>157)</sup>	17	Tr10x2 <sup>92) 157)</sup>	18
SHT-20-AWM-PL	M10	8.6	11	M8	20	Tr18x4	26	12h9	23
SHT-30-AWM-PL	M16	12.6	18	M12	30	Tr24x5	38	14h9	36

<sup>92)</sup> Lead screw end unmachined; <sup>157)</sup> Also available with with Tr10x3



- Design flexibility
- Ideal for 2 carriages
- Adjustable bearing clearance
- Available accessories  
► Page 1419
- Lead screw nuts are available separately ► Page 1262
- Available with motor  
► Page 1373

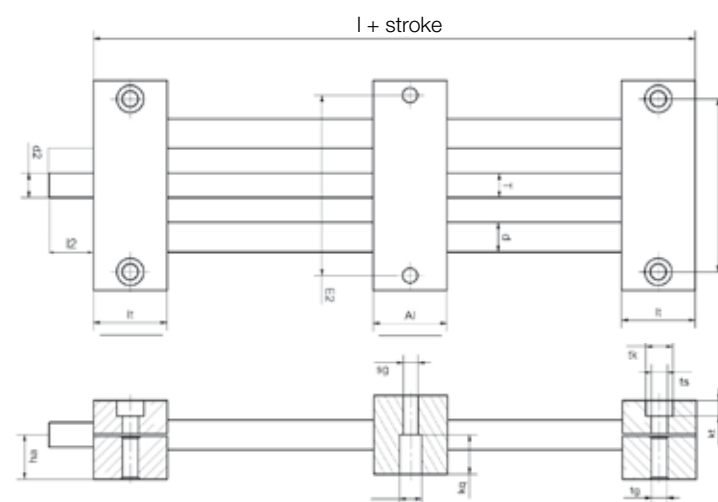


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Order key  
complete solution ► Page 1306

### SHTC-12-AWM



#### Technical data

Part No.	Max. stroke length [mm]	Aluminium shaft		Steel shaft		Max. static load capacity	
		Weight [kg]	Additional (per 100mm) [kg]	Weight [kg]	Additional (per 100mm) [kg]	axial [N]	radial [N]
SHTC-08-AWM	300	0.2	0.05	0.23	0.1	100	360
SHTC-12-AWM	750	0.7	0.1	0.8	0.2	700	2,800
SHTC-20-AWM	1,000	1.9	0.3	2.3	0.6	1,600	6,400
SHTC-30-AWM	1,250	4.6	0.6	5.8	1.4	2,500	10,000
SHTC-40-SWMH	1,500	11.0	0.9	16.0	2.4	4,000	16,000
SHTC-50-SWMH	1,500	17.0	1.2	26.3	3.5	6,250	25,000

#### Dimensions [mm]

Part No.	A	Al	H	E1	E2	I	R	f	lt	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15							
SHTC-08-AWM	65	38	52	55	55	96	32	1.5	15.5	10	5.5	M6
SHTC-12-AWM	85	30	34	70	73	90	42	2	30	11	6.6	M8
SHTC-20-AWM	130	36	48	108	115	108	72	2	36	15	9.0	M10
SHTC-30-AWM	180	50	68	150	158	150	96	4	50	20	13.5	M16
SHTC-40-SWMH	230	70	84	202	202	210	122	4	70	20	13.5	M16
SHTC-50-SWMH	280	80	100	250	250	240	152	4	80	20	13.5	M16

Part No.	kt	sk	sg	kq	d	T	l2	d2	ha
	±0.1							Standard	
SHTC-08-AWM	7	8	M5	4.6	8	Tr6x2	17	Tr6x2	13
SHTC-12-AWM	6.4	10	M6	6.0	12	Tr10x2 <sup>157)</sup>	17	Tr10x2 <sup>92)</sup> 157)	18
SHTC-20-AWM	8.6	11	M8	7.0	20	Tr18x4	26	12h9	23
SHTC-30-AWM	12.6	18	M12	10.6	30	Tr24x5	38	14h9	36
SHTC-40-SWMH	12.6	20	M16	39	40	Tr26x5	45	16h9	44
SHTC-50-SWMH	12.6	20	M16	49	50	Tr30x6	50	20h9	52

<sup>92)</sup> Lead screw end unmachined; <sup>157)</sup> Also available with with Tr10x3



- Pitch Sg10x12, Sg10x50, Sg18x100
- High-speed solution
- Available accessories  
► Page 1419
- Lead screw nuts are available separately ► Page 1262
- Available with motor  
► Page 1373

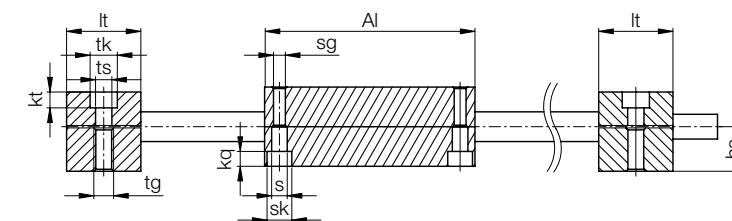
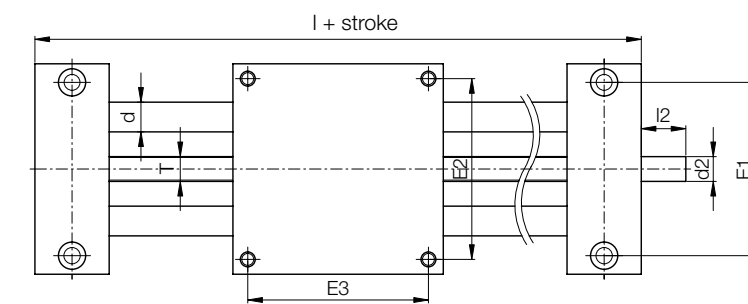


reddot design award  
winner 2006



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### SHTS-12-AWM-10x12



Configure online  
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)

#### Technical data and dimensions [mm]

Part No.	Max. stroke length [mm]	Aluminium shaft		Max. static load capacity	
		Weight [kg]	additional (per 100mm) [kg]	axial [N]	radial [N]
SHTS-12-AWM-10x12	750	1.1	0.1	100	400
SHTS-12-AWM-10x50	750	1.1	0.1	100	400
SHTS-20-AWM-18x100	1,000	3.2	0.3	400	1,600

#### Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	I	R	f	lt	tk	ts	tg
				±0.15	±0.15	±0.15							
SHTS-12-AWM-10x12	85	85	34	70	73	73	145	42	2	30	11	6.6	M8
SHTS-12-AWM-10x50	85	85	34	70	73	73	145	42	2	30	11	6.6	M8
SHTS-20-AWM-18x100	130	130	48	108	115	115	202	72	2	36	15	9.0	M10

Part No.	kt	s	sk	sg	kq	d	T	l2	d2	ha
	±0.1								Standard	
SHTS-12-AWM-10x12	6.4	6.3	10	M6	6.0	12	10x12	17	Sg10x12 <sup>92)</sup>	18
SHTS-12-AWM-10x50	6.4	6.3	10	M6	6.0	12	10x50	17	Sg10x50 <sup>92)</sup>	18
SHTS-20-AWM-18x100	8.6	6.4	11	M8	7.0	20	18x100	26	12h9	23

<sup>92)</sup> Lead screw end unmachined





- Higher speeds
- Higher precision
- Less axial clearance
- Belt drive permits radial loads
- Constant drive torque
- Zero-backlash function available for sizes 08 and 12
- Available accessories
  - Page 1419
- Lead screw nuts are available separately ► Page 1262
- Available with motor
  - Page 1373



Order key  
complete solution ► Page 1306

SHT-BB-12-AWM

- Shaft material
- Installation size
- Ball bearing
- Standard



Order key  
complete solution ► Page 1306

SHT-08-ZB-AWM

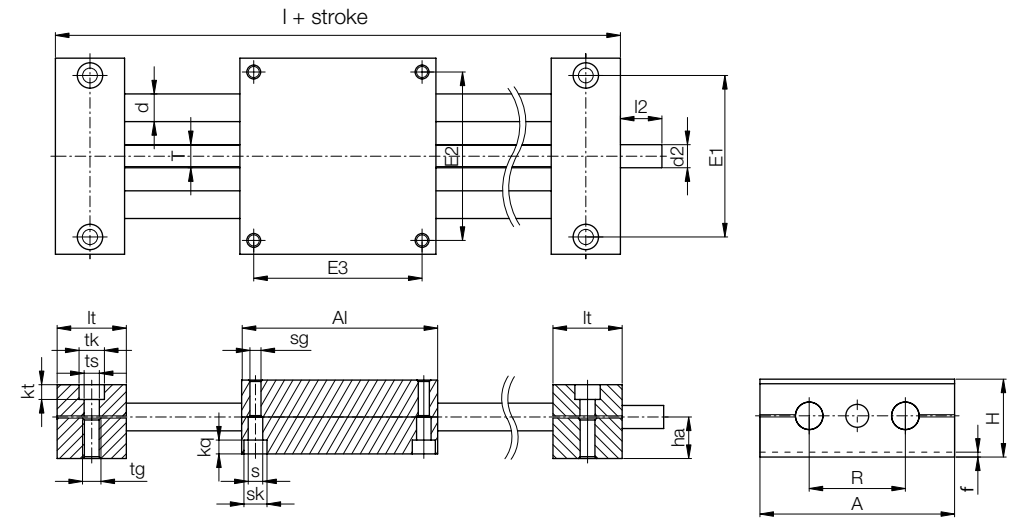
- Shaft material
- Ball bearing, zero-backlash
- Installation size
- Standard



Configure online  
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)

Technical data

Part No.	Max. stroke length	Aluminium shaft		Steel shaft		Max. static load capacity	
		Weight	Additional (per 100mm)	Weight	Additional (per 100mm)	axial	radial
	[mm]	[kg]	[kg]	[kg]	[kg]	[N]	[N]
SHTC-08-ZB	300	0.240	0.05	0.270	0.094	100	360
SHT-08-ZB-AWM-6X2P1	300	0.205	0.05	0.228	0.103	100	400
SHT-08-ZB-AWM-6.35x12,7	300	0.205	0.05	0.228	0.103	100	400
SHT-12-ZB-AWM-10x12	500	1.1	0.1	1.3	0.2	150	600
SHT-BB-12-AWM	500	1.1	0.1	1.3	0.2	350	1,400
SHT-BB-20-AWM	900	3.2	0.3	3.9	0.6	1,000	4,000
SHT-BB-30-AWM	1,000	8.6	0.6	10.9	1.4	1,500	6,000



Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	I	R	f	It	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15						
SHTC-08-ZB	65	38	23	52	55	26	96	32	1.5	15.5	10	5.5
SHT-08-ZB-AWM-6X2P1	65	65	23	52	55	55	96	32	1.5	15.5	10	5.5
SHT-08-ZB-AWM-6.35x12,7	65	65	23	52	55	55	96	32	1.5	15.5	10	5.5
SHT-12-ZB-AWM-10x12	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-BB-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-BB-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-BB-30-AWM	180	180	68	150	158	158	280	96	4	50	20	13.5

Part No.	tg	kt	s	sk	sg	kq	d	T	I2	d2	ha
		±0.1								Standard	
SHTC-08-ZB	M6	7	4.2	8	M5	4.6	8	6 / 6.35	15	6 / 6.35	13
SHT-08-ZB-AWM-6X2P1	M6	7	4.2	8	M5	4.6	8	Tr6x2	15	Tr6x2 <sup>92)</sup>	13
SHT-08-ZB-AWM-6.35x12,7	M6	7	4.2	8	M5	4.6	8	6.35x12.7	15	6.35 <sup>92)</sup>	13
SHT-12-ZB-AWM-10x12	M8	6.4	6.3	10	M6	6.0	12	10x12	17	10x12 <sup>92)</sup>	18
SHT-BB-12-AWM	M8	6.4	6.3	10	M6	6.0	12	Tr10x2	17	Tr10x2 <sup>92)</sup>	18
SHT-BB-20-AWM	M10	8.6	6.4	11	M8	7.0	20	Tr18x4	26	12h9	23
SHT-BB-30-AWM	M16	12.6	11.0	18	M12	10.6	30	Tr24x5	38	14h9	36

<sup>92)</sup> Lead screw end unmachined



- Corrosion-resistant carriages and shaft end supports made of stainless steel
- High grade stainless steel shafts (AISI 440B)
- Stainless steel lead screw
- Temperature-resistant up to +180°C with iglidur® X
- Food-compliant with iglidur® A180
- Can be configured online as SHTC version with short carriages and ball bearings

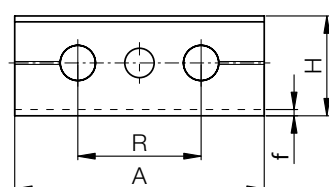
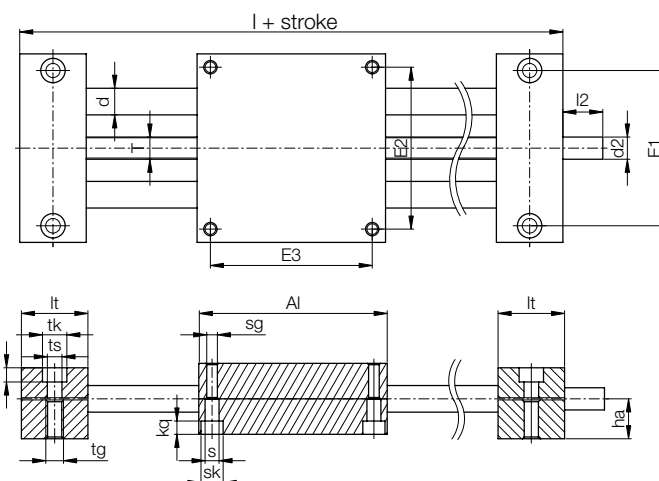


Order key  
complete solution ► Page 1306

### SHT-ESJ-08



Configure online  
► [www.igus.eu/drylin-sht-configurator](http://www.igus.eu/drylin-sht-configurator)



reddot design award  
winner 2006

### Technical data

Part No.	Max. stroke length	Steel shaft		Max. static load capacity	
		Weight	Additional (per 100mm)	axial	radial
	[mm]	[kg]	[kg]	[N]	[N]
SHT-ESJ-08	300	1.01	0.1	100	360
SHT-ESJ-12	750	2.81	0.24	700	2,800
SHT-ESJ-20	1,000	8.72	0.7	1,600	6,400
SHT-ESJ-30	1,250	24.11	1.47	2,500	10,000

### Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	I	R	f	It	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15						
SHT-ESJ-08	65	65	23	52	55	55	96	32	1.5	15.5	10	5.5
SHT-ESJ-12	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-ESJ-20	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-ESJ-30	180	180	68	150	158	158	280	96	4	50	20	13.5

Part No.	tg	kt	s	sk	sg	kq	d	T	I2	d2	ha
		±0.1								Standard	
SHT-ESJ-08	M6	7	4.2	8	M5	4.6	8	Tr6x2	17	Tr6x2	13
SHT-ESJ-12	M8	6.4	6.3	10	M6	6.0	12	Tr10x2	17	Tr10x2 <sup>92)</sup>	18
SHT-ESJ-20	M10	8.6	6.4	11	M8	7.0	20	Tr18x4	26	12h9	23
SHT-ESJ-30	M16	12.6	11.0	18	M12	10.6	30	Tr24x5	38	14h9	36

<sup>92)</sup> Lead screw end unmachined

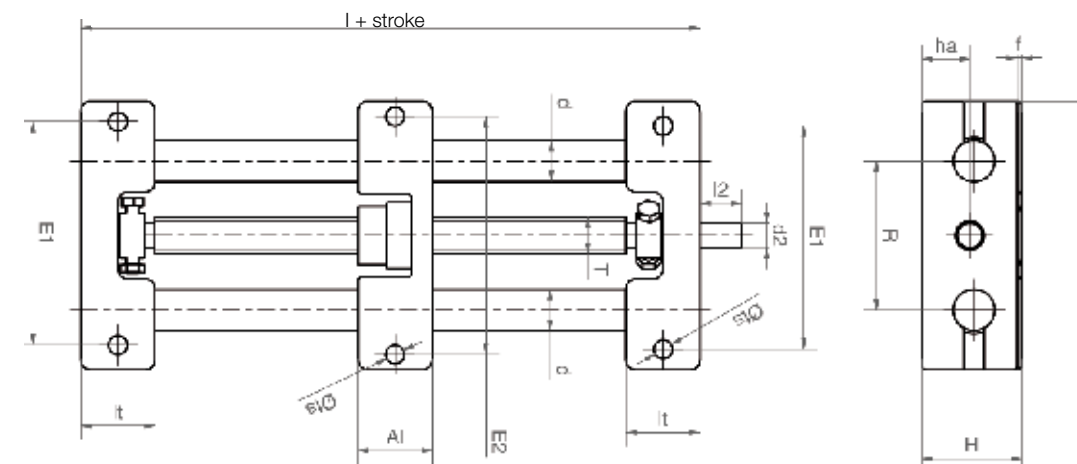


Order key  
complete solution ► Page 1306

### SHTC-20-EWM-HYD



- Lightweight
- For washdown
- Wide gaps
- Materials: plastic and stainless steel
- Lead screw nuts made of FDA-compliant iglidur® A180
- Available accessories ► Page 1419

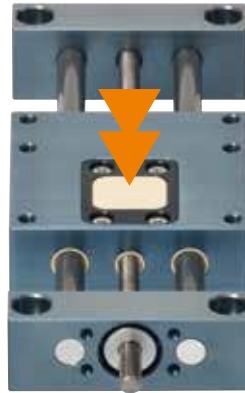


The lead screw linear unit can be delivered complete with FDA-compliant materials.

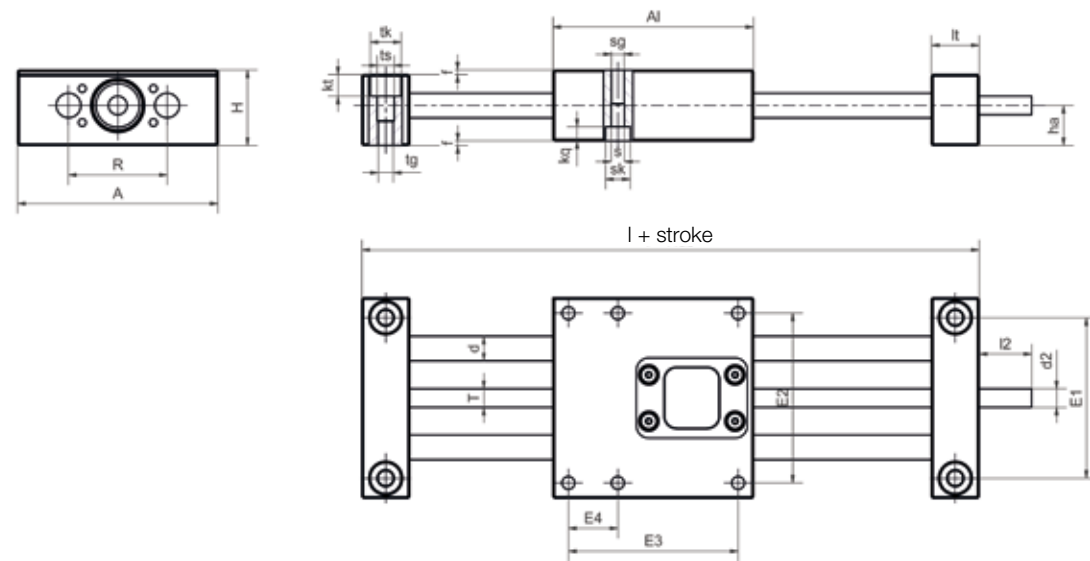
### Dimensions [mm]

Part No.	A	AI	H	E1	E2	I	R	f	It	ts	d	T	I2	d2	ha
	-0.3	-0.3		±0.15	±0.15										
SHTC-20-EWM-HYD	130	35	48	108	115	108	72	2	36	9.0	20	Tr18x4	26	12 h9	23





- Fast manual format adjustments
- Precise aluminium version
- Variable stroke length
- Multi-carriage solutions
- Recommended only for horizontal applications
- Available accessories ► **Page 1419**
- Available with motor ► **Page 1373**



## Technical data

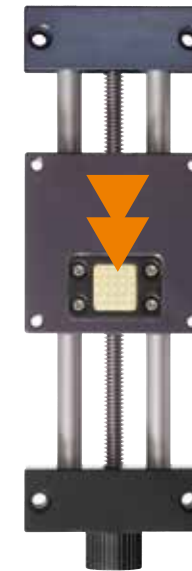
Part No.	Max. stroke length	Aluminium shaft		Max. static load capacity radial
		Weight	Additional (per 100mm)	
		[mm]	[kg]	
SHTC-08-AWM-FF	300	0.35	0.04	100
SHT-12-AWM-FF	750	1.1	0.1	2,800

### Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	E4	I	R	It	I2	d2
SHTC-08-AWM-FF	65	65	23	52	55	55	16	96	32	15.5	17	6
SHT-12-AWM-FF	85	85	34	70	73	73		145	42	30	17	Tr10x2 <sup>(92)</sup>

Part No.	f	tk	ts	tg	kt	s	sk	sg	kg	d	T	ha
		±0.1								Standard		
SHTC-08-AWM-FF	1.5	10	5.5	M6	7	4.2	8	M5	4.6	8	6	13
SHT-12-AWM-FF	2	11	6.6	M8	6.4	6.3	10	M6	6.0	12	Tr10x2	18

<sup>92)</sup> **Lead screw end unmachined**



- Fast manual format adjustments
  - Aluminium version
  - For fast format adjustments
  - Including self-locking brake
  - Variable stroke length
  - Only recommended for horizontal applications
  - Max. stat. axial load 200N  
(horizontal mounting position)
  - Max. dynamic. axial load 50N
  - Available accessories
- **Page 1419**
- Available with motor
- **Page 1373**

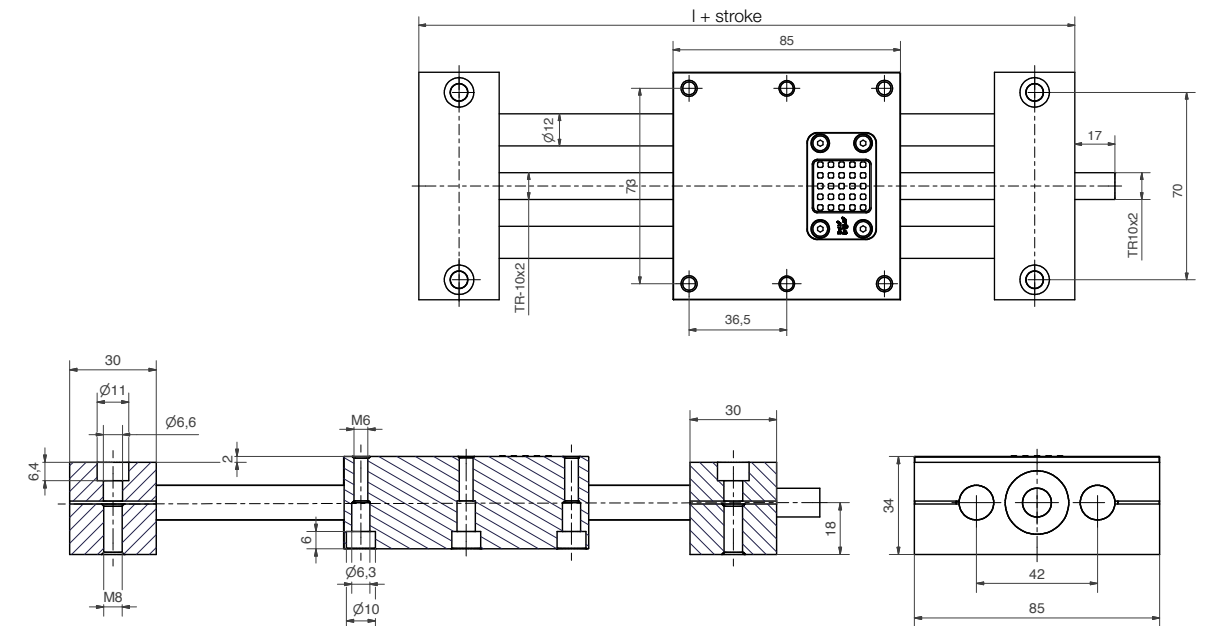


**Order key**  
complete solution ► Page 1306

**SHT-12-AWM-FF**



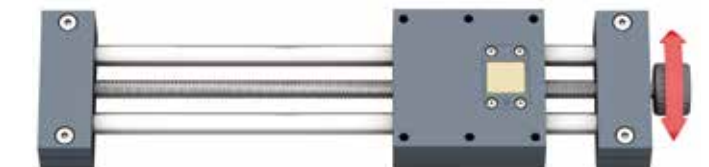
Fast Forward  
Shaft material  
Installation size  
Standard



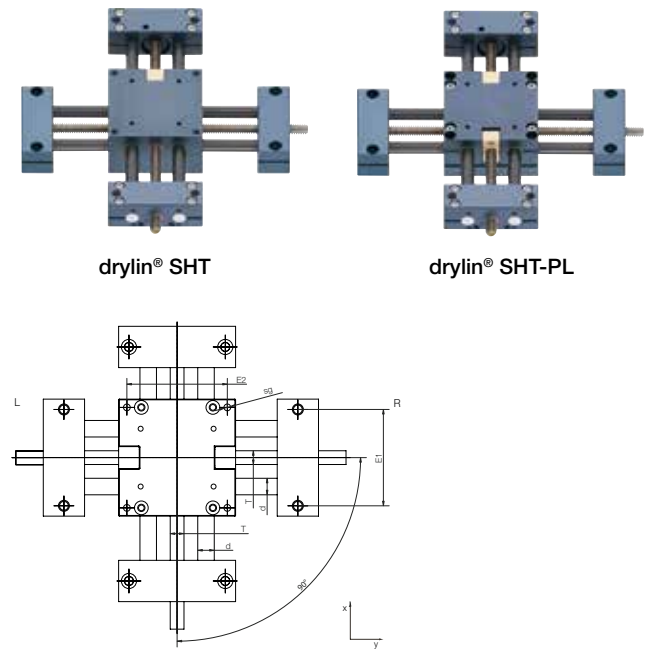
1.



2



press > disengage > move manually > click into place > fine-tuning



- Available as standard and pre-load version
- High precision, extreme stiffness and accurate alignment due to the single-piece carriage
- Adjustments by trapezoidal thread
- Assembly of upper unit with left or right adjustment possible
- Available accessories ► **Page 1419**

Dimensions [mm]

Part No.	Max. stroke length	A	H	E1	E2	Base length	Base length	R	f	lt	tk	ts	tg	kt
	[mm]	-0.3		±0.15	±0.15	lx	ly							
SHT-XY-08-AWM	150	65	42	52	56	96	96	32	1.5	15.5	10	5.5	M6	7
SHT-XY-12-AWM	350	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
SHT-XY-12-AWM-PL	350	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
SHT-XY-20-EWM-PL <sup>93)</sup>	500	130	86	108	115	202	202	72	2	36	15	9.0	M10	8.6

Part No.	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative		ha2-ha1	
SHT-XY-08-AWM	M5	8	Tr6x2/Tr6.35x2.54	15	5	–	15	5	–	13	29	16
SHT-XY-12-AWM	M6	12	Tr10x2	17	Tr10x2	6 h9	17	Tr10x2	6 h9	18	38	20
SHT-XY-12-AWM-PL	M6	12	Tr10x2	17	Tr10x2	6 h9	17	Tr10x2	6 h9	18	38	20
SHT-XY-20-EWM-PL <sup>93)</sup>	M8	20	TR18x4	26	TR18x4	12 h9	26	12 h9	–	23	63	40

Required accessories (e.g. hand wheel) can be ordered left- or right-mounted in the y-direction.

Order example for SHT-XY-12-AWM-L-200-300-HR, left adjustment, stroke 200/300mm, two hand wheels

<sup>93)</sup> For size 20 we recommend stainless steel shafts (EWM), AWM also available

XY-table order key

SHT-XY-12-AWM-PL-L-200-300-HR-ES

Lead screw material

Blank: Steel C15

ES: Stainless steel AISI 303 (standard with EWM)

Accessories/options

Blank: Without extras (standard)

HK: Lead screw clamp (2x)

PA: Position indicator (2x)

HR: Hand wheel (2x)

HTX: High temperature version up to +180°C

Z: Machined end TR10x2

Stroke y-direction

Stroke x-direction

Adjustment y-unit

L: Lead screw end on the left side

R: Lead screw end on the right side

Pre-load

Blank: Standard

PL: Clearance-free, pre-loaded

Shaft material

AWM: Hard-anodised aluminium

SWM: Cf53 (AISI 1055)

EWM: hardened high grade steel (AISI 440B)

Dimensions

12: Size 12mm ø

20: Size 20mm ø

XY-Table





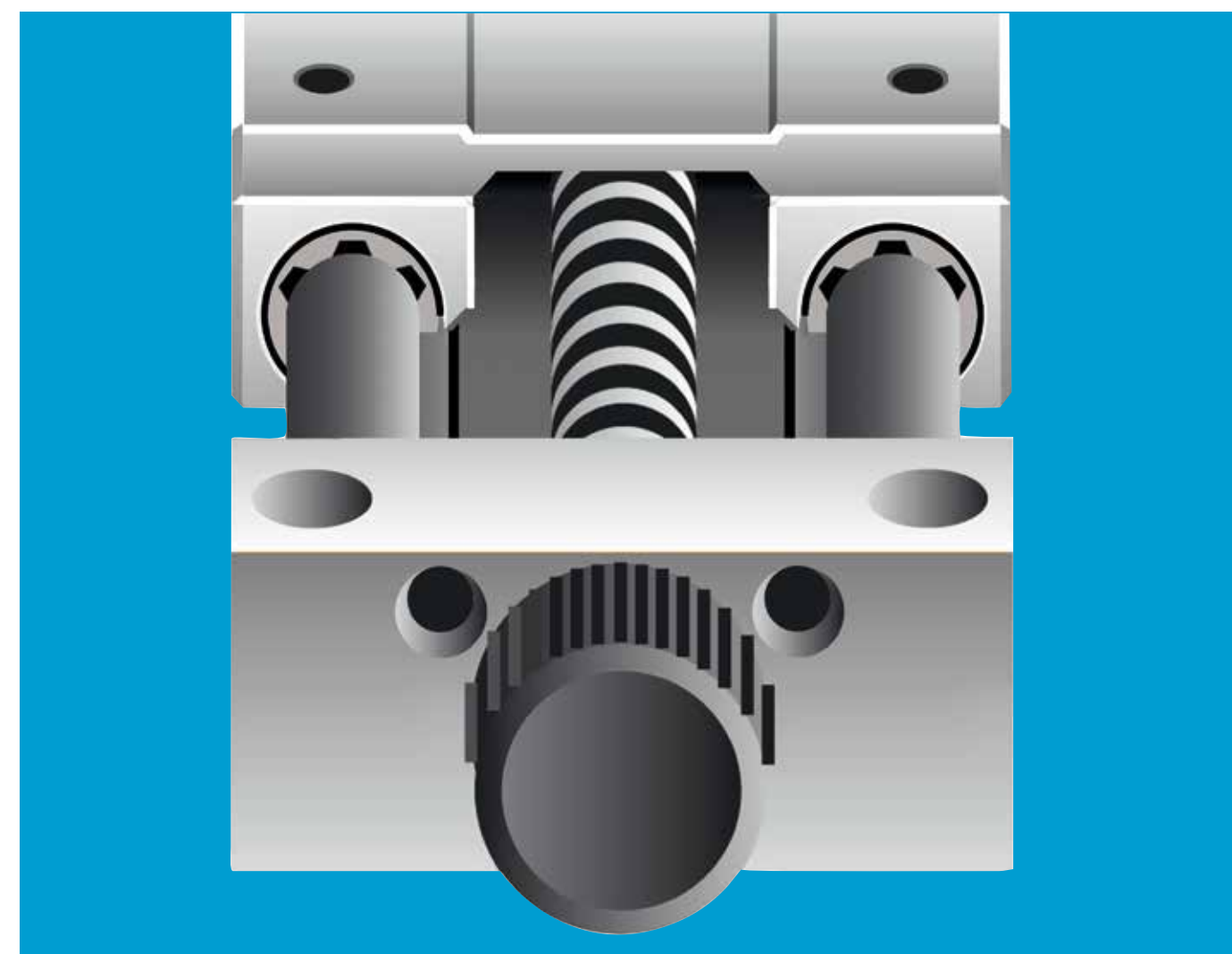
Order key for a complete system

**SHT-12-AWM-150-HR-ES****Lead screw material****Blank:** Steel C15 (standard)**ES:** Stainless steel AISI 303 (standard with EWM)**AL:** Anodised aluminium**Options****Blank:** Without extras (standard)**HK:** Lead screw clamp**PA:** Position indicator**HR:** Hand wheel**PL:** Clearance-free, pre-loaded**HYD:** Hygienic design**Z:** Machined end TR10x2**FF:** Fast Forward**ZB:** Zero-Backlash**Stroke length in mm****Shaft material****AWM:** Hard-anodised aluminium**SWM:** Cf53 (AISI 1055)**EWM:** hardened high grade steel  
(AISI 440B)**Dimensions****12:** Size 12mm ø (SHT, SHTC, SHTS)**20:** Size 20mm ø (SHT, SHTC, SHTS)**30:** Size 30mm ø (SHT, SHTC)**40:** Size 40mm ø (SHTC)**50:** Size 50mm ø (SHTC)**Type****SHT:** Standard**SHT-PL:** Pre-load**SHTC:** Variable**SHT-BB:** With ball-bearing mounted lead screw**SHTS:** With high helix lead screw**SHT-XY:** XY-table**SHT-ES:** Full stainless steel**Delivery time**

with aluminium shaft AWM:

2-3 days, with stainless steel shaft

EWM or steel shaft SWM: 3-8 days



## drylin® general drive technology – SLW linear modules

Lubrication-free linear modules based on  
drylin® W guides

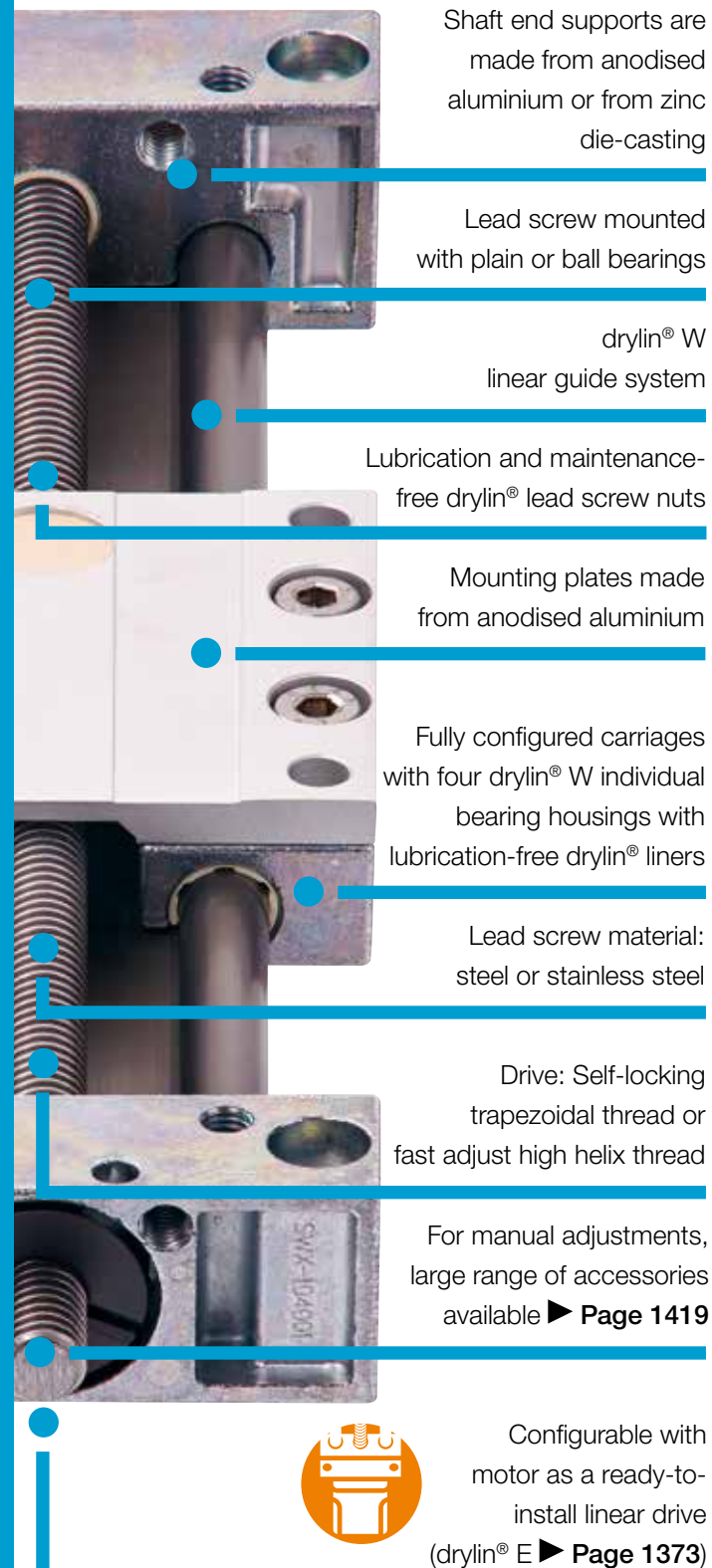
Drive: Trapezoidal or high helix lead screw

Torsion-resistant double shaft systems

Many carriage and rail options

Suitable for manual and motor-operated  
adjustments

## Modular design



## Lubrication-free linear modules – drylin® SLW

Torsion-resistant aluminium double shaft rails with many carriage versions characterise the drylin® W product range, and form a well rounded modular kit for the drylin® SLW linear modules. The modules are low profile, as well as robust. The drylin® SLW linear modules are ideal for manual adjustments, but can also be fitted with a motor to make an electrical linear actuator.

- Variable carriage widths and lengths
- Flat drylin® guide rails or high profile
- Corrosion-resistant option made of stainless steel available

### Typical application areas

- Format and lane adjustments
- Packaging technology
- Height adjustments
- 3D printers
- Camera adjustment



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



**Carriage lengths: 60-250mm**  
**Carriage widths: 54-195mm**  
**Stroke lengths: up to 1,250mm**



### Product finder

► [www.igus.eu/slw-productfinder](http://www.igus.eu/slw-productfinder)

## Flat and torsion-resistant



### SLW linear module – compact

- High torsional stability, fully supported
- Cost-effective
- Shaft end supports made from zinc, anodised aluminium or plastic (depending on installation size)

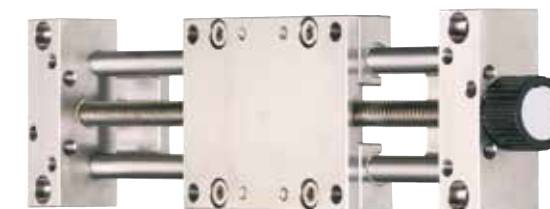
► **Page 1310**



### SLWE-BB linear module, ball bearing

- Efficient and dynamic
- Quiet, reduced clearance
- Up to 1,500rpm (depending on length and load)

► **Page 1312**



### SLW-ES linear module – stainless steel version

- With corrosion-resistant steel components
- Choice of bearing material: iglidur® J (standard), iglidur® A180 (FDA-compliant), iglidur® X (High temperature up to +150 °C)
- For environments involving contact with water and chemicals

► **Page 1316**



### SLWE-PL linear module, pre-load

- Lubrication-free and precise
- Pre-loaded trapezoidal lead screw nut (pre-load force: 50N)
- Manually adjustable radial clearance, reduction of the axial clearance

► **Page 1311**



### SLWS linear module with high helix thread

- Fast positioning
- High-helix lead screw drives
- Up to 100mm stroke per rotation

► **Page 1313**



### Linear module special designs

- SLW with protect mechanism for applications with high levels of dirt
- High flexibility through SLWT with double lead screw
- XY-table solutions

► **Page 1318**



drylin® SLW | Linear modules | Product range

Compact

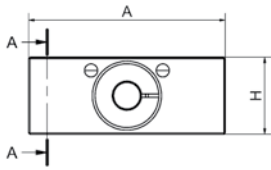
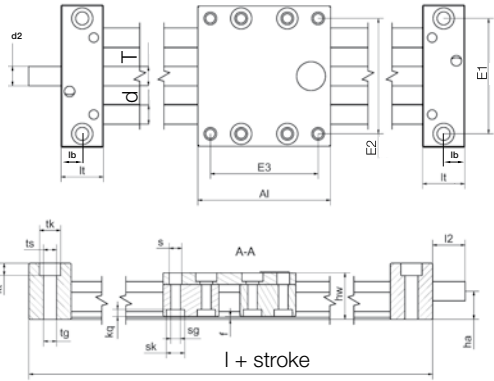


- Flat and compact
- High torsional stability
- Fully supported
- drylin® W guide rails, hard-anodised aluminium
- Available accessories
  - Page 1419
- Lead screw nuts are available separately ► Page 1262
- Available with motor
  - Page 1373



Order key  
complete solution ► Page 1320

SLW-1040



Technical data and dimensions [mm]

Part No.	Design	Max. stroke length	Weight	additional (per 100mm)	Max. static load capacity		Shaft end support material
		[mm]			axial	radial	
			[kg]	[kg]	[N]	[N]	
SLW-0630	■	300	0.2	0.08	50	200	Plastic
SLW-1040	●	750	0.7	0.10	700	2,800	Zinc die-casting
SLW-1080	●	750	0.9	0.20	700	2,800	Aluminium
SLW-10120	●	750	1.6	0.25	700	2,800	Aluminium
SLW-1660	●	750	1.5	0.30	1,200	4,600	Aluminium
SLW-2080	●	1,000	3.0	0.40	1,600	6,400	Aluminium
SLW-25120	●	1,250	5.9	0.90	2,500	10,000	Aluminium

Part No.	A	AI <sup>94)</sup>	H	E1	E2	E3	I	hw	f	lt	lb	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15	±0.15								
SLW-0630	54	60	20	40	45	51	100	18	1.2	20	8	11	6.6	-
SLW-1040	74	69	29	60	60	56	113	24	1.5	22	11	11	6.8	M8
SLW-1080	108	100	29	94	94	87	144	24	1.5	22	11	11	6.8	M8
SLW-10120	154	100	29	140	140	87	144	24	1.5	22	11	11	6.8	M8
SLW-1660	104	100	37	84	86	82	150	35	1.5	25	12.5	15	9.0	M10
SLW-2080	134	150	46	116	116	132	206	44	1.5	28	14	15	8.6	M10
SLW-25120	200	150	60	173	173	128	220	55	2.5	35	17.5	20	13.5	M16

Part No.	kt	s	sk	sg	kq	d	T	I2	d2	ha
	±0.1								Standard	
SLW-0630	8.0	4.5	7.0	M4	2.0	6	M8	15	M8	9.5
SLW-1040	6.4	6.6	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.5
SLW-1080	6.4	6.6	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.5
SLW-10120	M8	6.4	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.50
SLW-1660	8.6	9.0	11	M8	5.5	16	Tr14x4	20	Tr14x4 <sup>92)</sup>	18.5
SLW-2080	8.6	9.0	14	M8	5.5	20	Tr18x4	26	12h9	23.0
SLW-25120	12.6	11.0	15	M10	5.0	25	Tr24x5	38	14h9	30.0

<sup>92)</sup> Lead screw end unmachined; <sup>94)</sup> Carriages also in 100, 150, 200 and 250mm lengths available upon request

drylin® SLW | Linear modules | Product range

Pre-load version

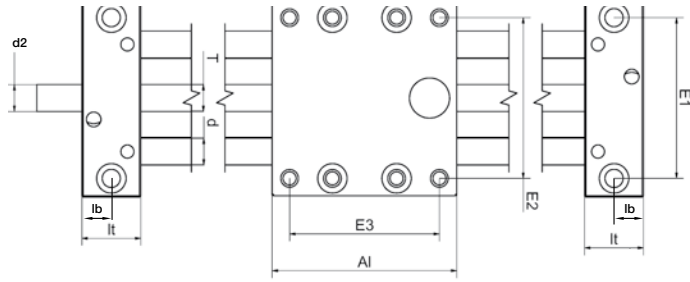
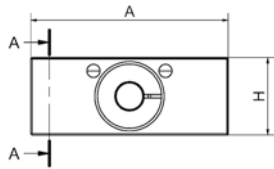
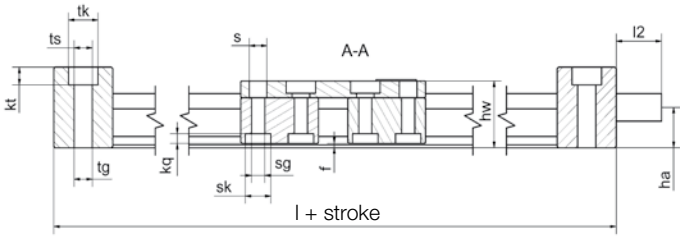
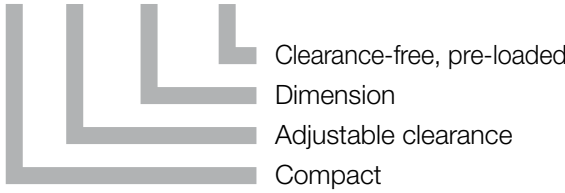


- Radial and axial pre-load
- Manual adjustable clearance
- High torsional stability
- Fully supported
- drylin® W guide rails, hard-anodised aluminium
- Available accessories
  - Page 1419
- Lead screw nuts are available separately ► Page 1262
- Available with motor
  - Page 1373



Order key  
complete solution ► Page 1320

SLWE-1040-PL



Technical data ► See SLW on left side

Dimensions [mm]

Part No.	A	AI <sup>94)</sup>	H	E1	E2	E3	I	hw	f	lt	lb	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15							
SLWE-1040-PL	74	69	29	60	60	56	113	24	1.5	22	11	11	6.8
SLWE-1080-PL	108	100	29	94	94	87	144	24	1.5	22	11	11	6.8
SLWE-1660-PL	104	100	37	84	86	82	150	35	1.5	25	12.5	15	9.0
SLWE-2080-PL	134	150	46	116	116	132	206	44	1.5	28	14	15	8.6

Part No.	tg	kt	s	sk	sg	kq	d	T	I2	d2	ha
		±0.1								Standard	
SLWE-1040-PL	M8	6.4	6.6	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.5
SLWE-1080-PL	M8	6.4	6.6	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.5
SLWE-1660-PL	M10	8.6	9.0	11.0	M8	5.5	16	Tr14x4	20	Tr14x4 <sup>92)</sup>	18.5
SLWE-2080-PL	M10	8.6	9.0	14.0	M8	5.5	20	Tr18x4	26	12h9	23.0

<sup>92)</sup> Lead screw end unmachined; <sup>94)</sup> Carriages also in 100, 150, 200 and 250mm lengths available upon request

# drylin® SLW | Linear modules | Product range

With ball bearing supported lead screw

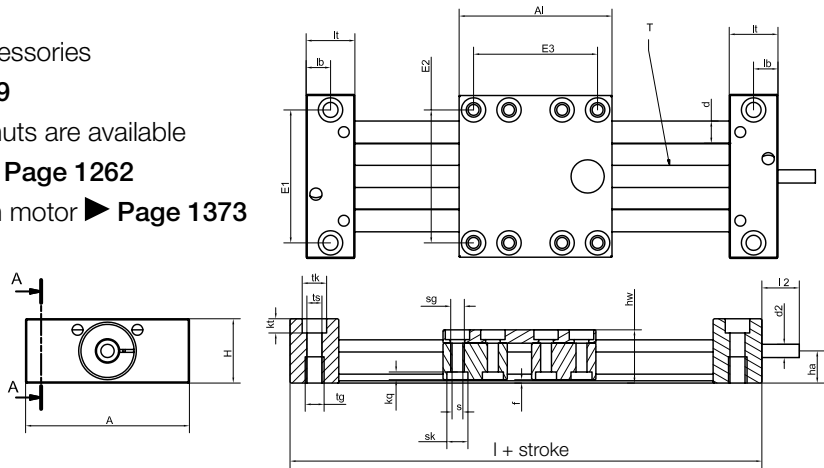


- Lower drive force
- Optimised clearance
- Up to 1,500rpm (depending on length and load)
- Aluminium drylin® W guide rails, hard-anodised
- Quiet operation – reduced vibration of the overall system
- Ball bearings in both shaft end supports
- Available accessories ► **Page 1419**
- Lead screw nuts are available separately ► **Page 1262**
- Available with motor ► **Page 1373**









**Order key**  
complete solution ► **Page 1320**

**SLWE-BB-1040**



## Technical data and dimensions [mm]

Part No.	Design <sup>96)</sup>		Max. stroke		Weight	additional		Max. static load capacity				Max.		Max.
			length			(per 100mm)	axial	radial	speed	feed rate				
				[mm]	[kg]		[kg]	[N]		[N]		[1/min]		[m/min]
SLW-BB-0630			300	0.25		0.08		100		200		1,000		1.5
SLWE-BB-1040			500	0.90		0.10		500		2,000		1,500		3.0
SLWE-BB-1080			500	1.10		0.20		500		2,000		1,500		3.0
SLWE-BB-1660			750	1.80		0.30		700		2,800		1,500		6.0
SLWE-BB-2080			900	3.30		0.40		1,250		5,000		1,500		6.0
SLW-BB-25120			1,000	3.30		0.40		1,500		6,000		1,200		6.0
Part No.	A	Al	H	E1	E2	E3	I	hw	f	lt	lb	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15	±0.15								
SLW-BB-0630	54	60	20	40	45	51	112	18	1.2	26	14	11	6.8	M8
SLWE-BB-1040	74	69	29	60	60	56	129	24	1.5	30	19	11	6.8	M8
SLWE-BB-1080	108	100	29	94	94	87	160	24	1.5	30	19	11	6.8	M8
SLWE-BB-1660	104	100	37	84	86	82	170	35	1.5	35	22.5	15	9.0	M10
SLWE-BB-2080	134	150	46	116	116	132	230	44	1.5	40	26	15	8.6	M10
SLW-BB-25120	200	150	60	173	173	128	220	55	2.5	35	17.5	20	13.5	M16
Part No.	kt	sk	sg	kq	s	d	T	l2	d2	d2 <sup>95)</sup>	ha			
	±0.1								Standard					
SLW-BB-0630	8.0	7.0	M4	2.0	4.5	6	Tr8x1.5	15	Tr08x1.5	–	9.5			
SLWE-BB-1040	6.4	9.5	M6	4.4	6.6	10	Tr10x2	17	Tr10x2	6 h9	14.5			
SLWE-BB-1080	6.4	9.5	M6	4.4	6.6	10	Tr10x2	17	Tr10x2	6 h9	14.5			
SLWE-BB-1660	8.6	11.0	M8	5.5	9.0	16	Tr14x4	20	Tr14x4	8 h9	18.5			
SLWE-BB-2080	8.6	14.0	M8	5.5	9.0	20	Tr18x4	26	12 h9	–	23.0			
SLW-BB-25120	12.6	15	M10	5.0	11.0	25	Tr24x5	38	14 h9	–	30.0			

<sup>95)</sup> Optional machined lead screw end <sup>96)</sup> Double rails, square ► **Page 930**, round ► **Page 936**

# drylin® SLW | Linear modules | Product range

Compact with high helix thread

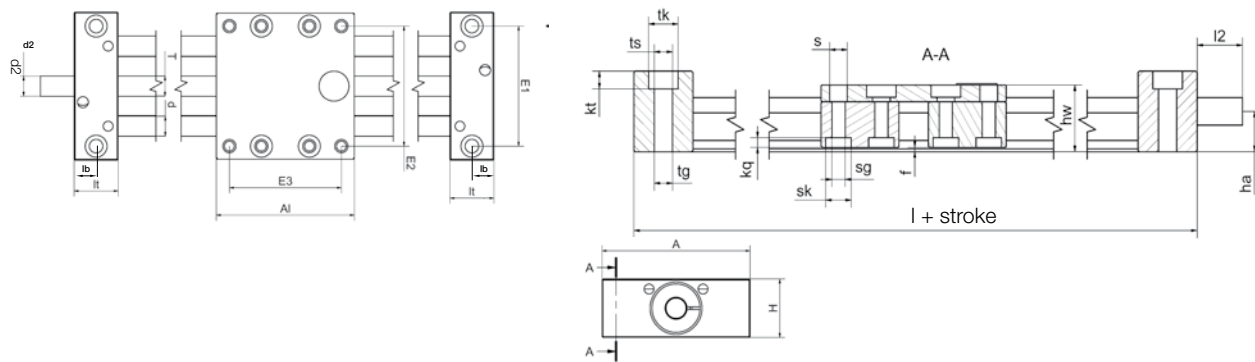


- Pitch 08x15, 10x12, 10x50, 18x100
- High torsional stability
- drylin® W guide rails, hard-anodised aluminium
- BB-version with ball bearing supported lead screw available
- Available accessories ► **Page 1419**
- Lead screw nuts are available separately ► **Page 1262**



**Order key**  
complete solution ► **Page 1320**

**SLWS-0630-08x15**



## Technical data and dimensions [mm]

Part No.	Design <sup>96)</sup>		Max. stroke length		Weight			additional			Max. static load capacity			
								(per 100mm)			axial		radial	

<sup>92)</sup> Lead screw end unmachined <sup>96)</sup> Double rails, square ► **Page 930**, round ► **Page 936**

# drylin® SLW | Linear modules | Product range

With protected lead screw

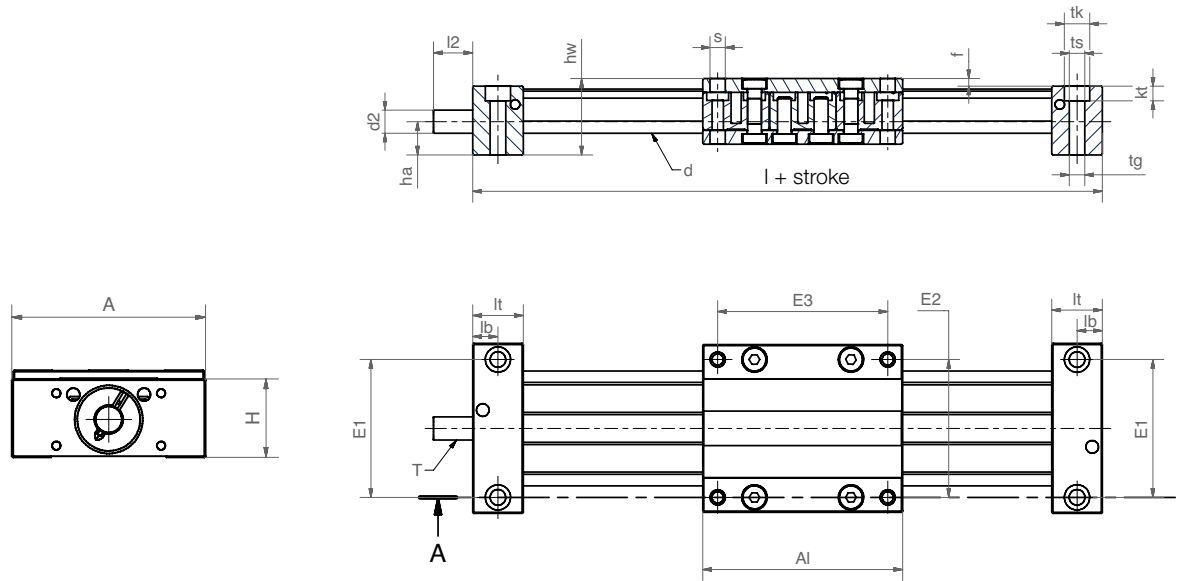


- drylin® W profile rail as a protective mechanism
- Available with pitches 10x2, 10x12, 10x50
- Low profile design
- Available with motor ► **Page 1373**



**Order key**  
complete solution ► **Page 1320**

**SLW-BB-PT-1040**



### Technical data

Part No.	Max. stroke length	Weight [kg]	additional (per 100mm) [kg]	Max. static load capacity		Shaft end support material
	[mm]			axial [N]	radial <sup>97)</sup> [N]	
SLW-PT-1040	750	0.75	0.20	700	2,000	Aluminium
SLW-BB-PT-1040	750	1.10	0.20	500	2,000	Aluminium

### Dimensions [mm]

Part No.	A	AI	H	E1/E2	E3	I	hw	f	lt	lb	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15								
SLW-PT-1040	74	87	29	60	74	131	33.25	3.25	22	11	11	6.8	M8
SLW-BB-PT-1040	74	87	29	60	74	147	33.25	3.25	30	19	11	6.8	M8

Part No.	kt	d	T	l2	d2	d2 <sup>98)</sup>	ha
	±0.1						
SLW-PT-1040	6.4	10	Tr10x2	17	Tr10x2	6 h9	14.50
SLW-BB-PT-1040	6.4	10	Tr10x2	17	Tr10x2	6 h9	14.50

<sup>97)</sup> Depends on load and rotation speed <sup>98)</sup> Thread/remaining thread visible

# drylin® SLW | Linear modules | Product range

Dual action linear system

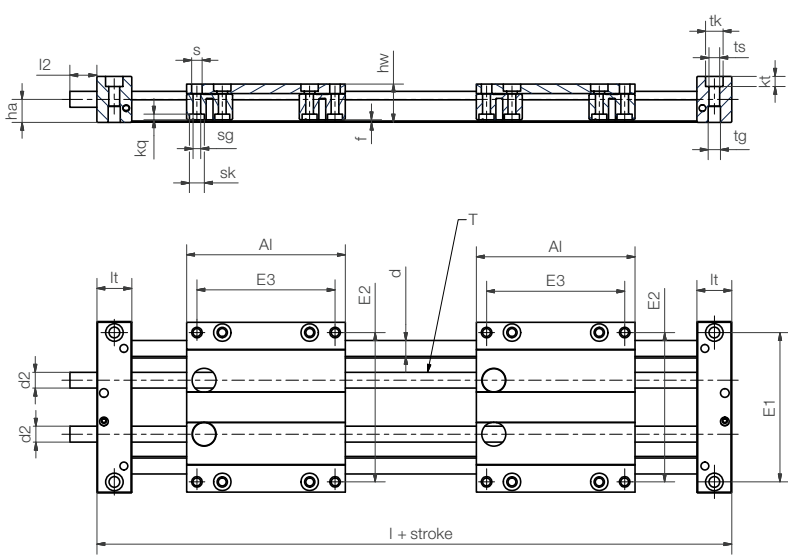
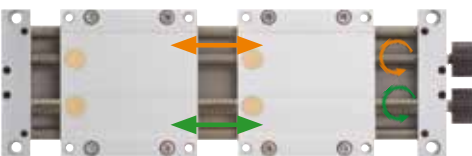
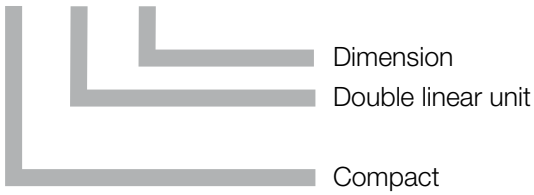


- Carriages can be controlled separately
- Different lead screw pitches can be applied
- Separate manual adjustment of carriages
- Design flexibility
- Clearance adjustment (optional)



**Order key**  
complete solution ► **Page 1320**

**SLWT-1080**



### Technical data

Part No.	Max. stroke length	Weight [kg]	additional (per 100mm) [kg]	Max. static load capacity		Shaft end support material
	[mm]			axial [N]	radial [N]	
SLWT-1080	750	1.6	0.25	700	2,800	Aluminium

### Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	I	hw	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15			±0.1			
SLWT-1080	108	100	29	94	94	87	244	24	1.5	22	11	6.8

Part No.	tg	kt	sk	s	sg	kq	d	T	l2	d2	d2	ha	sd2
	±0.1												
SLWT-1080	M8	6.4	9.5	6.6	M6	4.4	10	Tr10x2 <sup>92)</sup>	17	Tr10x2	6 h9	14.50	34

<sup>92)</sup> Lead screw end unmachined



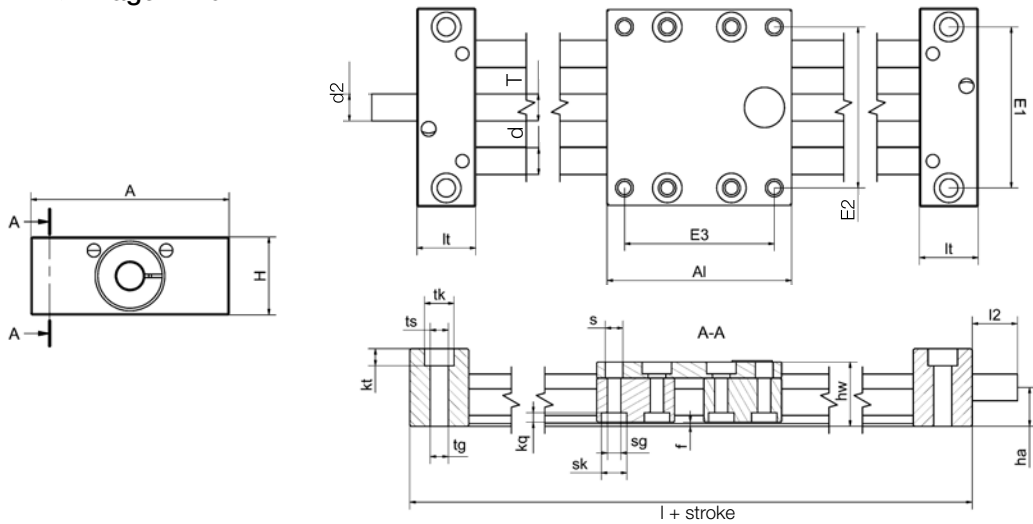
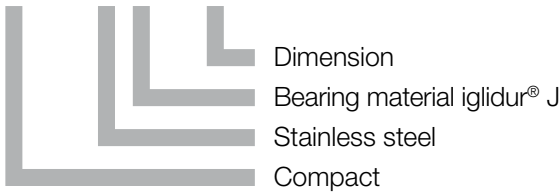


- Stainless steel version with corrosion-resistant steel components (AISI 303, AISI 316 and AISI 316Ti)
- Choice of bearing material:
  - iglidur® J = Standard
  - iglidur® A180 = FDA-compliant
  - iglidur® X = High temperature up to +150°C<sup>117)</sup>
- Available accessories
  - Page 1419



Order key  
complete solution ► Page 1320

SLW-ESJ-1040



Technical data

Part No.	Shafts Ø	Max. stroke length	Weight	additional (per 100mm)	Max. stat. load capacity	
	[mm]	[mm]	[kg]	[kg]	axial [N]	radial [N]
SLW-ESJ-1040	10	750	1.4	0.2	700	2,800
SLW-ESX-1040	10	750	1.4	0.2	700	2,800
SLW-ESA180-1040	10	750	1.4	0.2	700	2,800
SLW-ESJ-2080	20	1,000	5.7	0.64	1,600	6,400
SLW-ESA180-2080	20	1,000	5.7	0.64	1,600	6,400

Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	I	hw	f	lt	lb	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15	±0.15								
SLW-ES-1040	74	100	29	60	60	87	144	24	1.5	22	11	11	6.8	M8
SLW-ES-2080	134	150	46	116	116	132	206	44	1.5	28	14	15	8.6	M10

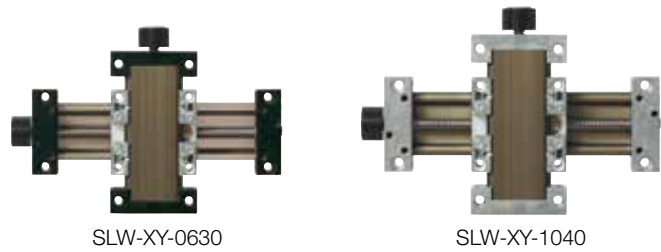
Part No.	kt	s	sk	sg	kq	d	T	l2	d2	ha
	±0.1								Standard	
SLW-ES-1040	6.4	6.6	9.5	M6	4.4	10	Tr10x2	17	Tr10x2 <sup>92)</sup>	14.5
SLW-ES-2080	8.6	9.0	14	M8	5.5	20	Tr18x4	26	12h9	23.0

<sup>92)</sup> Lead screw end unmachined

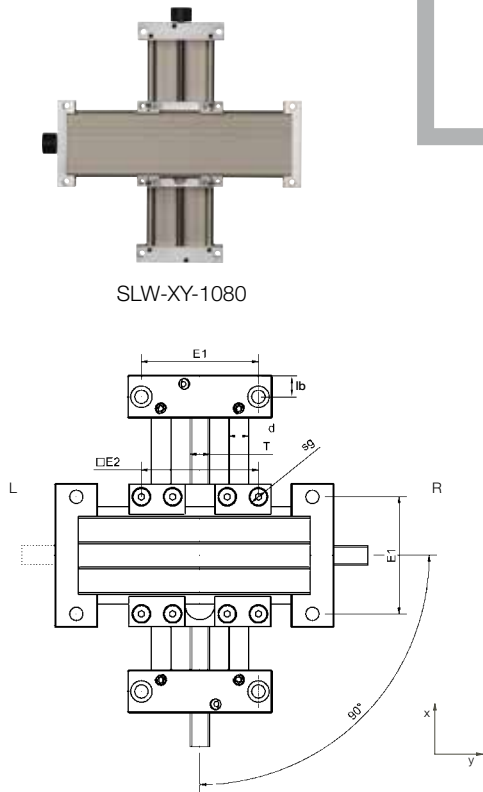
<sup>117)</sup> In the event of severe temperature fluctuations during transport, storage and use, thermal expansion effects cannot be ruled out

drylin® SLW | XY-tables | Product range

Compact XY-tables for manual adjustments

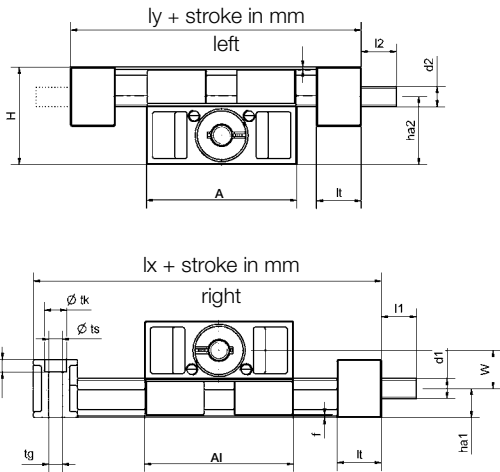
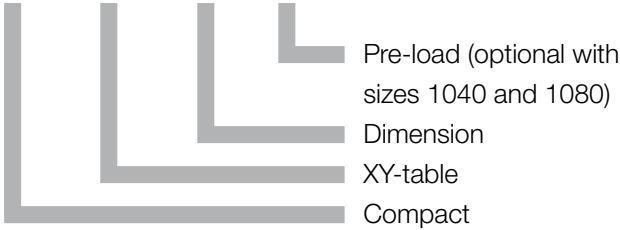


- Aluminium drylin® W guide rails, hard-anodised
- Pre-load SLWE-XY-PL version also available (optional, sizes: 1040/1080)
- Available accessories ► **Page 1419**



Order key

SLW-XY-1040-PL



Dimensions [mm]

Part No.	Max. stroke length	A	Al	H	E1	E2	Base length	Base length	f	lt	lb	tk	ts	tg	kt
	[mm]	-0.3			±0.15	±0.15	lx	ly							
SLW-XY-0630	150	54	54	38	40	45	94	94	1.5	20	10	11	6.6	-	8
SLW-XY-1040	300	74	73	48	60	60	117	117	1.5	22	11	11	6.8	M8	6.4
SLW-XY-1080	300	108	107	48	94	94	151	151	1.5	22	11	11	6.8	M8	6.4

Dimensions [mm]

Part No.	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative			ha2-ha1
SLW-XY-0630	M4	5	M8	15	M8	-	15	M8	-	9.5	28.5	18.4
SLW-XY-1040	M6	10	Tr10x2	17	Tr10x2	6 h9	17	Tr10x2	6 h9	14.5	33.5	20
SLW-XY-1080	M6	10	Tr10x2	17	Tr10x2	6 h9	17	Tr10x2	6 h9	14.5	33.5	19

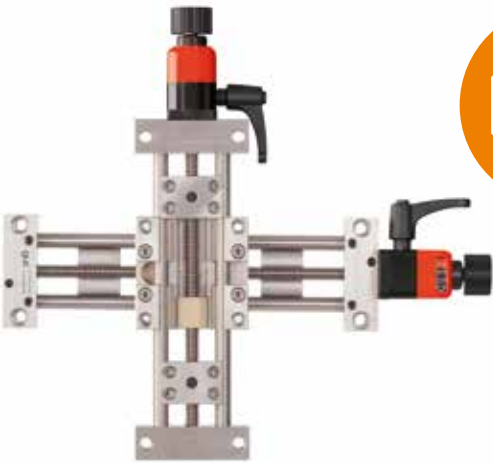
The hand wheel can be ordered left or right-mounted in the y-direction.

Left: SLW-XY-1040-L-200-300 for 200mm stroke length on the x-axis and 300mm on the y-axis

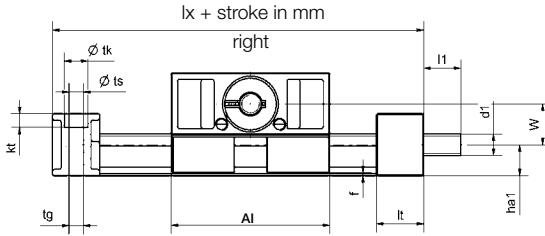
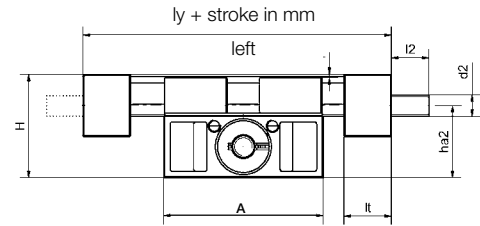
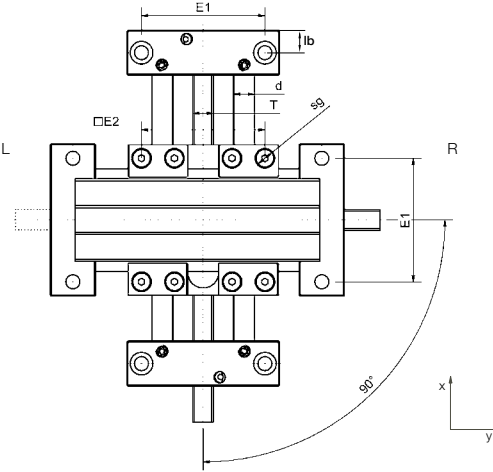
Right: SLW-XY-1040-R-200-300 for 200mm stroke length on the x-axis and 300mm on the y-axis

drylin® SLW | XY-tables | Product range

XY-table - stainless steel version



- For manual adjustments
- High torsional stability
- Structure entirely made from 316 stainless steel materials
- Chemical and corrosion-resistant
- Available accessories ► **Page 1419**



Dimensions [mm]

Part No.	Max. stroke length	A	Al	H	E1	E2	Base length	Base length	f	lt	lb	tk	ts	tg	kt
	[mm]	-0.3			±0.15	±0.15	lx	ly					±0.1		
SLW-XY-ESJ-1040	300	74	73	48	60	60	117	117	1.5	22	11	11	6.8	M8	6.4

Dimensions [mm]

Part No.	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative			ha2-ha1
SLW-XY-ESJ-1040	M6	10	Tr10x2	17	Tr10x2	6 h9	17	Tr10x2	6 h9	14.5	33.5	19

The hand wheel can be ordered left or right-mounted in the y-direction.

Left: SLW-XY-ESJ-1040-L-200-300 for 200mm stroke length on the x-axis and 300mm on the y-axis

Right: SLW-XY-ESJ-1040-R-200-300 for 200mm stroke length on the x-axis and 300mm on the y-axis



Order key for a complete system

SLW-1040-150-HR-ES

## Lead screw material

**Blank:** Steel C15 (standard)**ES:** Stainless steel AISI 303**AL:** Anodised aluminium

## Additional options

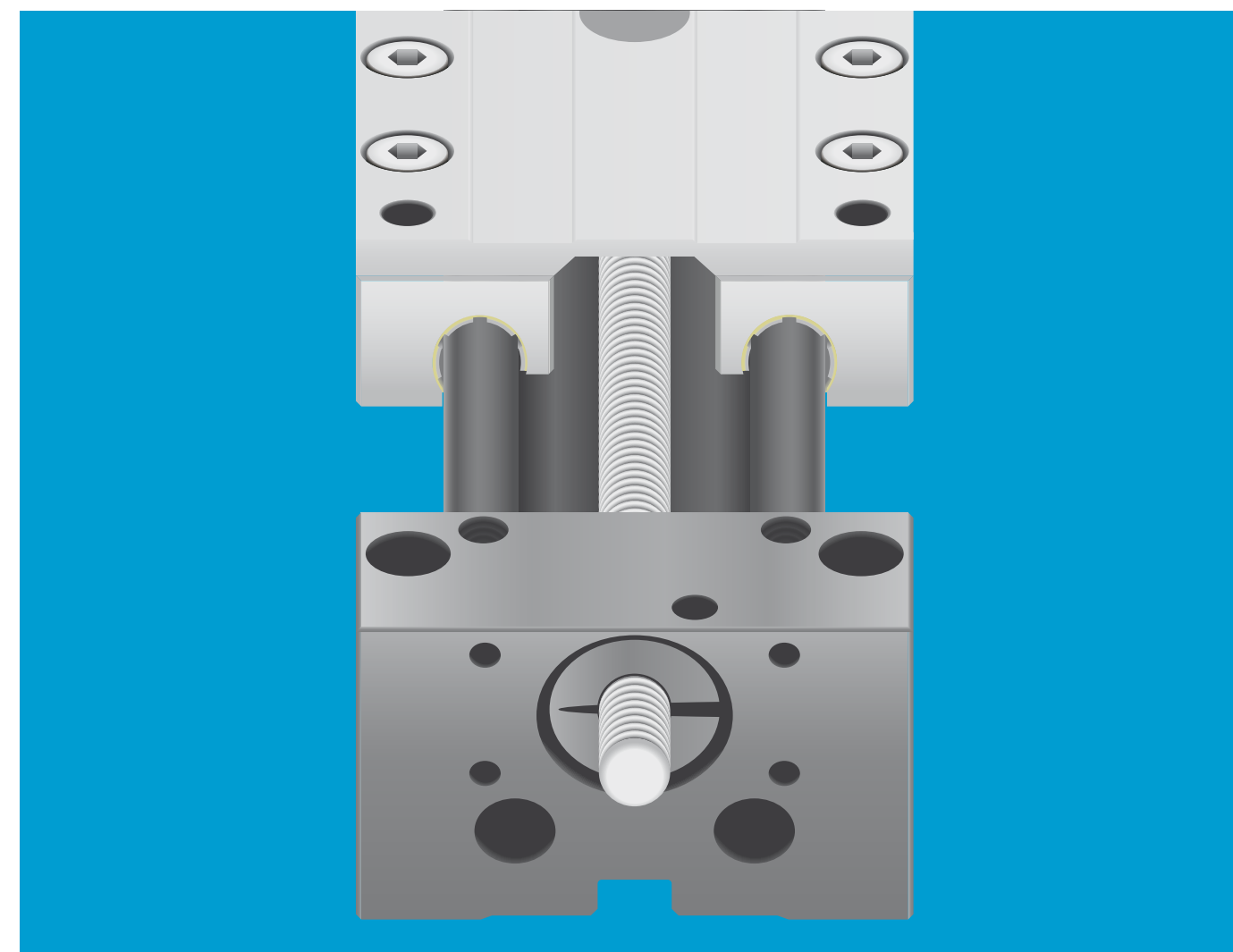
**blank:** without extras (standard)**HK:** Lead screw clamp**PA:** Position indicator**HR:** Hand wheel**PL:** Clearance-free, pre-loaded**Z:** Pins in TR10x2 (optional)**WT:** Angular drive

## Stroke length in mm

## Dimensions

**0630:** Shaft ø 6mm, width 30mm (SLW, SLWS)**1040:** Shaft ø 10mm, width 40mm (SLW, SLWE)**1080:** Shaft ø 10mm, width 80mm (SLW, SLWE)**1660:** Shaft ø 16mm, width 60mm (SLW, SLWE)**2080:** Shaft ø 20mm, width 80mm (SLW, SLWE)**25120:** Shaft ø 25mm, width 120mm (SLW)

## Type

**SLW:** Standard**SLWE-PL:** With pre-load**SLWE-BB:** ball bearing supported lead screw**SLWS:** With high helix lead screw**SAW:** High design**SLW-ES:** Stainless steel version**SLW-XY:** XY-tablesdrylin® general drive technology –  
SAW linear modulesLubrication-free linear modules based on  
drylin® W guides

Drive: Trapezoidal or high helix lead screw

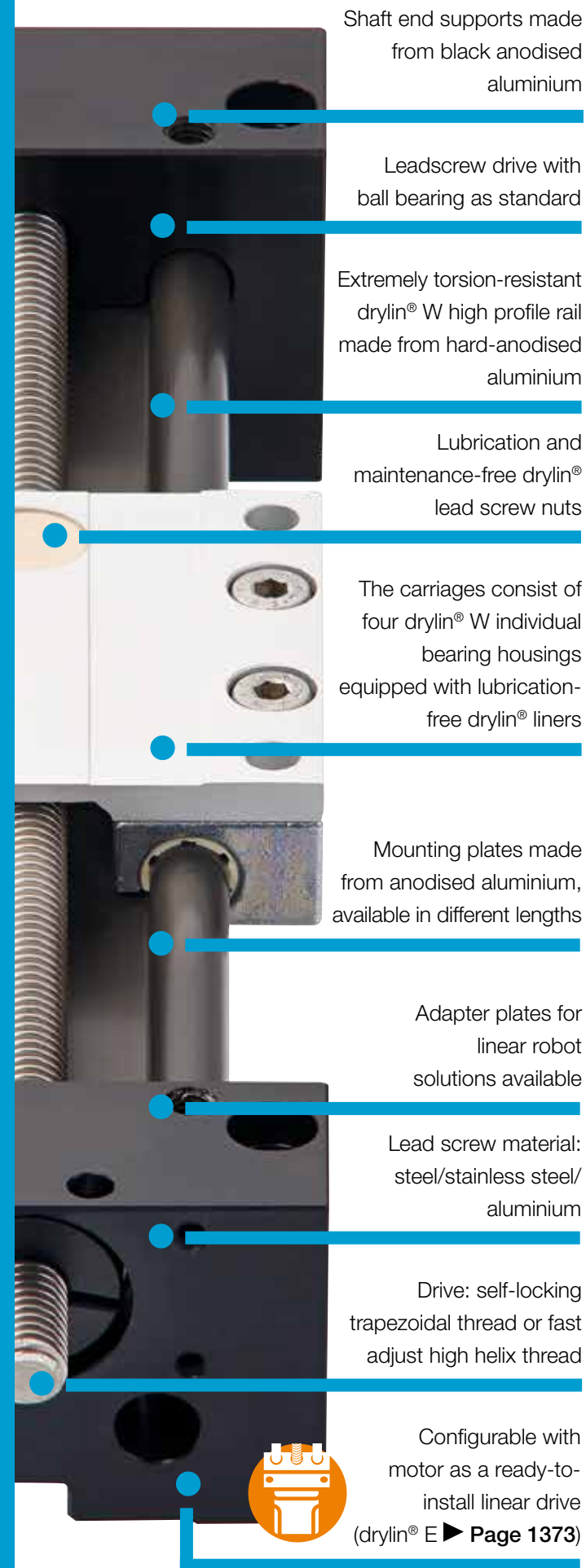
Robust design

Ready-to-install stepper or DC motors

Ball bearing







Shaft end supports made from black anodised aluminium

Leadscrew drive with ball bearing as standard

Extremely torsion-resistant drylin® W high profile rail made from hard-anodised aluminium

Lubrication and maintenance-free drylin® lead screw nuts

The carriages consist of four drylin® W individual bearing housings equipped with lubrication-free drylin® liners

Mounting plates made from anodised aluminium, available in different lengths

Adapter plates for linear robot solutions available

Lead screw material: steel/stainless steel/aluminium

Drive: self-locking trapezoidal thread or fast adjust high helix thread

Configurable with motor as a ready-to-install linear drive (drylin® E ► **Page 1373**)

## Lubrication-free linear modules – drylin® SAW

The drylin® W high profile provides the torsion-resistant base for the linear axes of the SAW series. Thanks to the ball bearing supported lead screw and high profile design, the SAW linear modules are perfectly suitable for the direct connection to stepper or DC motors. Slots in profile sections enable initiators to be freely positioned and, at the same time, enable set-up as a multi-axis linear robot by means of suitable adapter plates.

- Optimised unit for motor connection
- drylin® W high profile with variable mounting options using clamping elements or slot nuts
- For manual or electrical adjustments
- Ideal for single and/or multi-axial constructions

### Typical application areas

- Positioning functions
- 3D scanner
- Format adjustments
- Linear robot structures
- Height adjustments



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



**Carriage lengths: 60-250mm**  
**Carriage widths: 54-107mm**  
**Stroke lengths: up to 750mm**



### Product finder

► [www.igus.eu/saw-productfinder](http://www.igus.eu/saw-productfinder)



### SAW linear module

- Robust high design in 4 sizes
- Drive: Trapezoidal or high helix lead screw
- For manual positioning or motorised operation

► **Page 1324**



### DLE linear module

- Configured linear modules with NEMA stepper motors
- Available in 24 hours
- Pre-assembled and tested

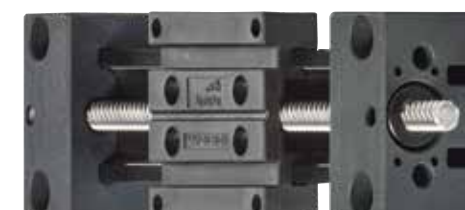
► **Page 1326**



### SAWC linear module

- Compact short design
- With integrated drylin® E lead screw motor
- Optimised ratio of useful length to total length

► **Page 1325**



### SAWP linear module

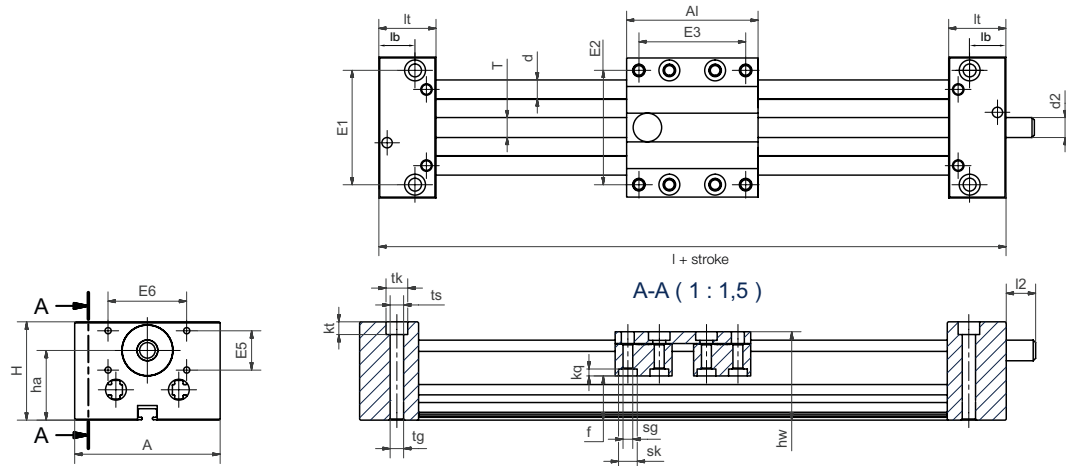
- Dynamic linear module with drylin® W carbon profile
- Extremely lightweight and robust
- Stroke lengths up to 300mm

► **Page 1125**

## Robust design



- Trapezoidal or high helix threads
- ball bearing supported lead screw
- Rail profile in high design, extremely torsion-resistant
- Aluminium drylin® W guide rails, hard-anodised
- High stability
- Cost-effective and 100% lubrication-free
- Available accessories ► **Page 1419**
- Lead screw nuts are available separately ► **Page 1262**



## Technical data

Part No.	Max. stroke length [mm]	Weight [kg]	Additional (per 100mm)	Max. speed [rpm]	Max. static load capacity	
					axial [N]	radial [N]
SAW-0630	300	0.5	0.1	1,000	100	400
SAW-1040	500	1.0	0.1	1,500	500	2,000
SAW-1080	750	1.9	0.2	1,500	750	2,000
SAW-1660	750	2.8	0.5	1,500	750	3,000

## Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	E5	E6	I	lc	hw	f	It	lb
	-0.3	-0.3		+0.15	+0.15	+0.15								
SAW-0630	54	60/100	32	40	45	51/91	11	23	112/152	92	30	13.5	26	10
SAW-1040	74	69/100/150	50	60	60	56/87/137	20	40	129/160/210	91	45	22.5	30	19
SAW-1080	108	100	58	94	94	87	-	-	163	131.5	49	22.5	31.5	15.75
SAW-1660	104	150	77	84	86	132	20	40	220	175	72	38.5	35	22.5

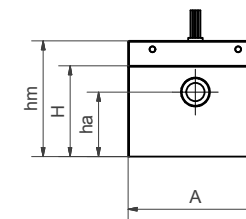
Part No.	tk	ts	tg	kt	sk	sg	kq	d	T	I2	d2	ha
				±0.1					Ø			
SAW-0630	11	6.6	-	20	-	M4	10	□5	Tr8x1.5	15	Tr8x1.5	21.5
SAW-1040	11	6.8	M8	6.4	9.5	M6	3.5	10	Tr10x2	17	Tr10x2 Ø6 h9 <sup>113)</sup>	35.5
SAW-1080	11	6.8	M8	18	9.5	M6	3.5	10	Tr12x3	17	Tr12x3 Ø8 h9 <sup>113)</sup>	37.5
SAW-1660	15	9.0	M10	8.6	11	M8	5.5	16	Tr14x4	20	Tr14x4 Ø8 h9 <sup>113)</sup>	59.0

<sup>113)</sup> Lead screw end unmachined, also available with machined end

## Direct drive in short design



- Smaller installation space and more stroke
- Compact short design due to the use of drylin® E lead screw motors
- Optimised ratio of useful length to total length (compared to the SAW series, up to 70mm)
- Improved operating characteristics
- Space-saving and lightweight
- Available accessories ► **Page 1419**



## Technical data

Part No.	Max. stroke length [mm]	Weight [kg]	Additional (per 100mm)	Max. speed [rpm]	Max. static load capacity	
					axial [N]	radial [N]
SAWC-0630	300	0.5	0.1	1,000	100	200
SAWC-1040	500	1.0	0.1	1,500	500	2,000

## Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	I	lc	hw	f	It	lb
	-0.3	-0.3		+0.15	+0.15	+0.15						
SAWC-0630	54	50	42.5	40	45	51	139	75	30	13.5	15	7.5
SAWC-1040	74	69	50	60	60	56	183	82	45	22.5	19	9.5

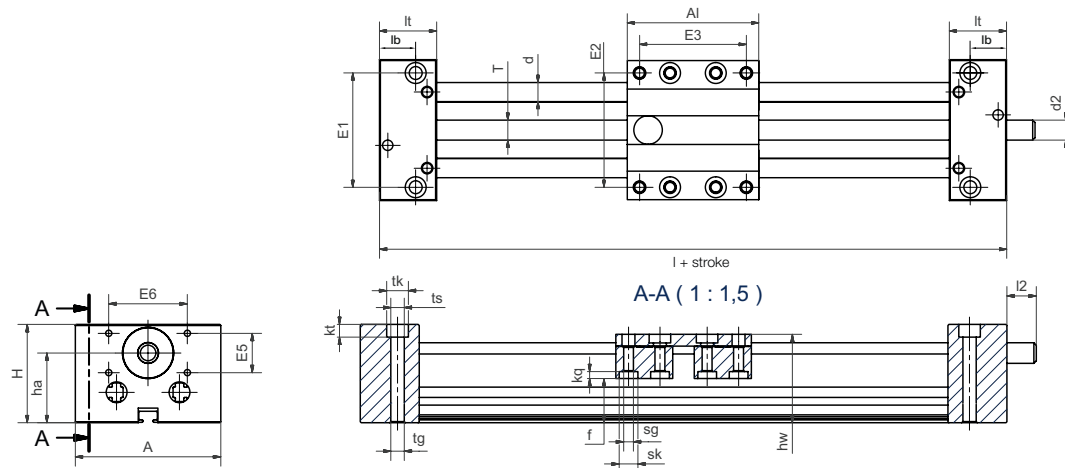
  

Part No.	tk	ts	tg	kt	sk	sg	kq	d	T	ha
				±0.1					Ø	
SAWC-0630	8	4.2	M5	20	7	M4	2	5	Tr08x1.5 Sg08x15	21.5
SAWC-1040	11	6.8	M8	6.4	9.5	M6	3.5	10	Tr10x2 <sup>92)</sup> Sg10x12	35.5

<sup>92)</sup> Lead screw end unmachined



- drylin® linear modules with motor
- Available from stock
- Ready-to-install and pre-assembled
- NEMA stepper motors with stranded wires
- Available accessories ► **Page 1419**



## Technical data

Part No.	Max. stroke length [mm]	Weight [kg]	Additional (per 100mm)	Max. speed [rpm]	Max. static load capacity	
					axial [N]	radial [N]
DLE-SA-0004	300	0.5	0.1	1,000	100	400
DLE-SA-0005	500	1.0	0.1	1,500	500	2,000
DLE-SA-0006	750	1.9	0.2	1,500	750	2,000

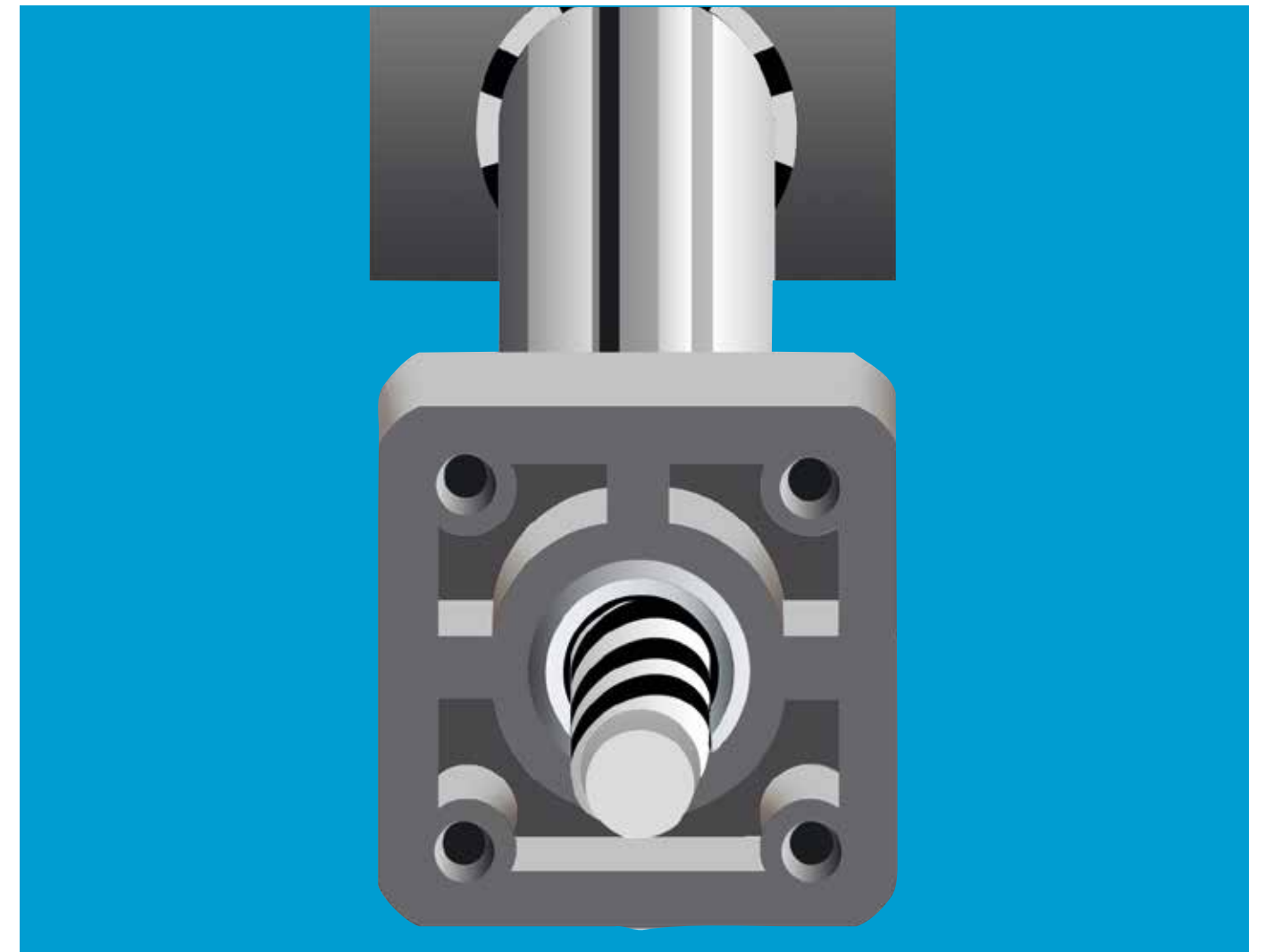
## Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	E5	E6	I	lc	hw	f	lt	lb
	-0.3	-0.3		+0.15	+0.15	+0.15								
DLE-SA-0004	54	60/100	32	40	45	51/91	11	23	112/152	92	30	13.5	26	10
DLE-SA-0005	74	69/100/150	50	60	60	56/87/137	20	40	129/160/210	91	45	22.5	30	19
DLE-SA-0006	108	100	58	94	94	87	-	-	163	131.5	49	22.5	31.5	15.75

Part No.	tk	ts	tg	kt	sk	sg	kq	d	T	l2	d2	ha
				±0.1					Ø			
DLE-SA-0004	11	6.6	-	20	-	5	10	□5	Tr8x1.5	15	Tr8x1.5	21.5
DLE-SA-0005	11	6.8	M8	6.4	9.5	M6	3.5	10	Tr10x2	17	Tr10x2 Ø6 h9 <sup>113)</sup>	35.5
DLE-SA-0006	11	6.8	M8	18	9.5	M6	3.5	10	Tr12x3	17	Tr12x3 Ø8 h9 <sup>113)</sup>	37.5

<sup>113)</sup> Lead screw end unmachined, also available with machined end



## drylin® general drive technology – SET linear modules

Lubrication-free single-tube adjustment

Drive: trapezoidal thread

Simple, smooth design

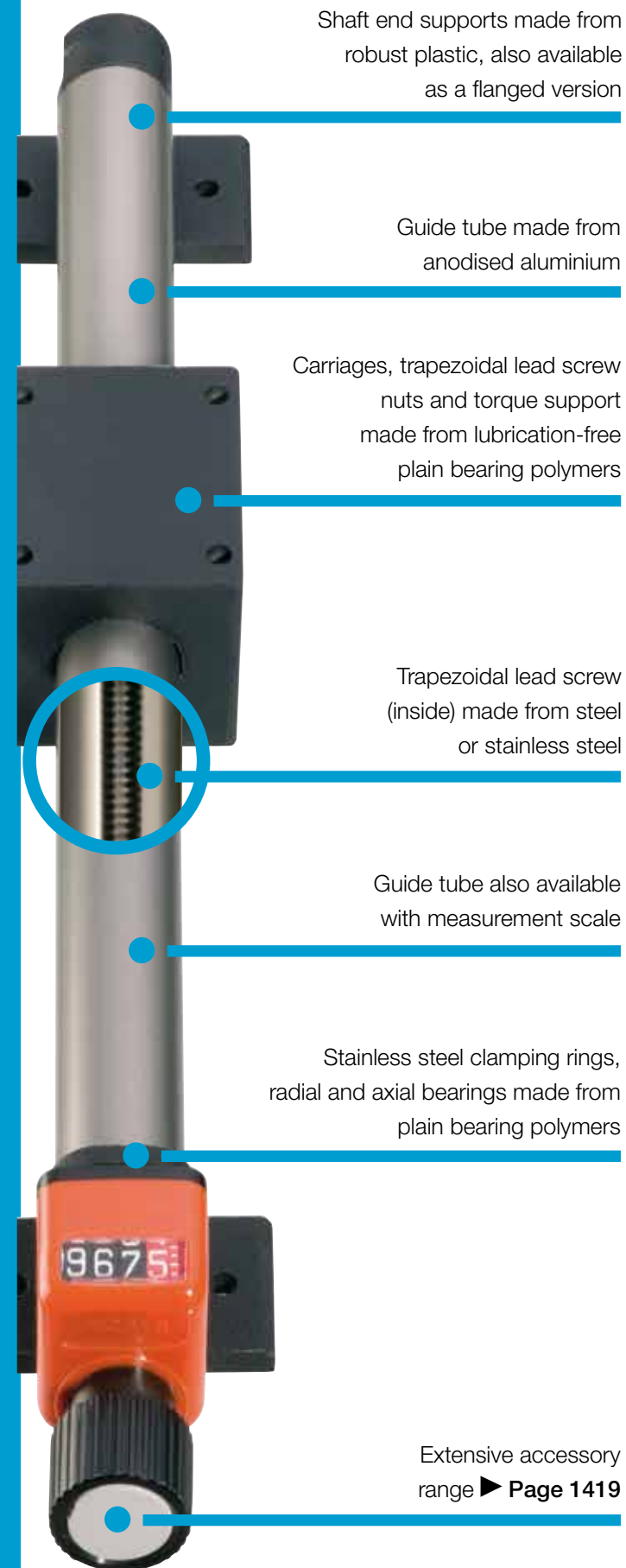
Lightweight due to aluminium and plastic

Temperature resistance up to +50°C





## Single-tube adjustment



Shaft end supports made from robust plastic, also available as a flanged version

Guide tube made from anodised aluminium

Carriages, trapezoidal lead screw nuts and torque support made from lubrication-free plain bearing polymers

Trapezoidal lead screw (inside) made from steel or stainless steel

Guide tube also available with measurement scale

Stainless steel clamping rings, radial and axial bearings made from plain bearing polymers

Extensive accessory range ► **Page 1419**

## Lubrication-free linear unit "easytube"

The linear unit for easy adjustment functions is characterised by a simple but effective and solid design. A complete system is built up from few components. The outer anodised aluminium tube guides the carriage/s and at the same time protects the trapezoidal lead screw and lead screw nut from external influences. Carriage, torque support and trapezoidal lead screw nut are in one component and are made from a special plain bearing high-performance polymer. This guarantees freedom from lubrication with simultaneously low coefficient of friction and optimal wear rates. The iglidur® bearing materials are also used in the thrust bearings of the lead screw.

- Protected lead screw
- Effective design
- Available with measurement scale without lead screw
- Flanged version for axial mounting in surfaces and profiles

### Typical application areas

- Sensor and camera positioning
- Format adjustment



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



**Carriage lengths: 30-55mm**  
**Stroke lengths: up to 850mm**



### Product finder

► [www.igus.eu/set-productfinder](http://www.igus.eu/set-productfinder)

## Efficient design with protected lead screw and variable mounting



### easytube single tube linear unit

- For light format adjustments
  - Protected lead screw, torque-resistant
  - Drive: Trapezoidal or high-helix lead screw
- **Page 1330**



### easytube with double flange

- For axial mounting
  - Simple, smooth design
- **Page 1331**



### easytube with single flange

- For horizontal and vertical adjustments
  - Single aluminium flange
  - Space-saving structure
- **Page 1332**



### easytube with measurement scale

- With lasered, wash-proof scale
  - Carriage with clamp
  - Available with/without lead screw
- **Page 1333**



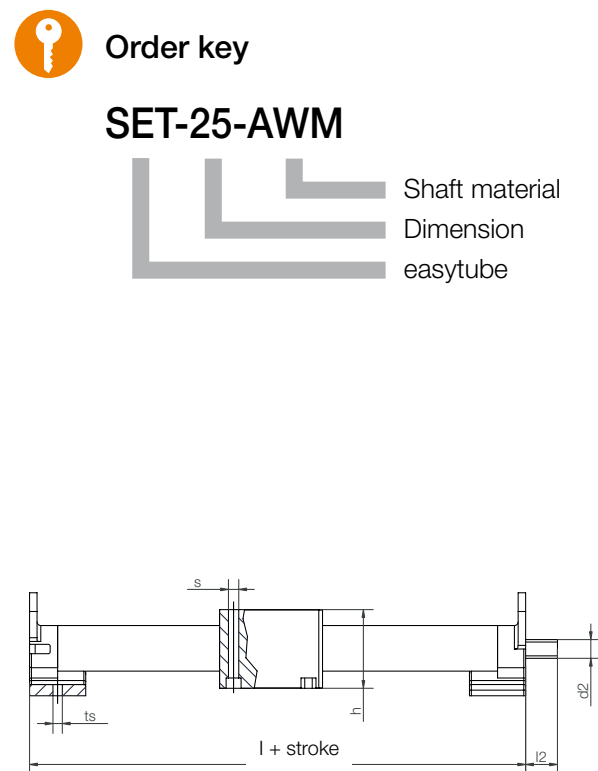
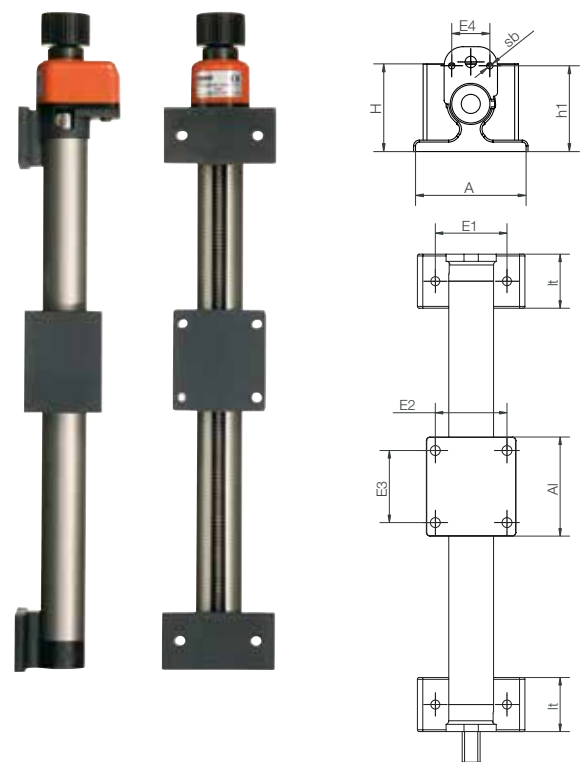
### easytube "light"

- Lightweight linear carriage
  - Compact structure
  - Also available as flanged version
- **Page 1334**



### Accessories for linear modules

- Position indicator, hand wheels, lead screw clamps, angular drives and more
- **From page 1419**



- For simple adjustments
- With protected lead screw
- Corrosion-free with stainless steel lead screw
- Lightweight due to aluminium and plastic
- Temperature-resistant up to +60°C
- Available accessories ► **Page 1419**

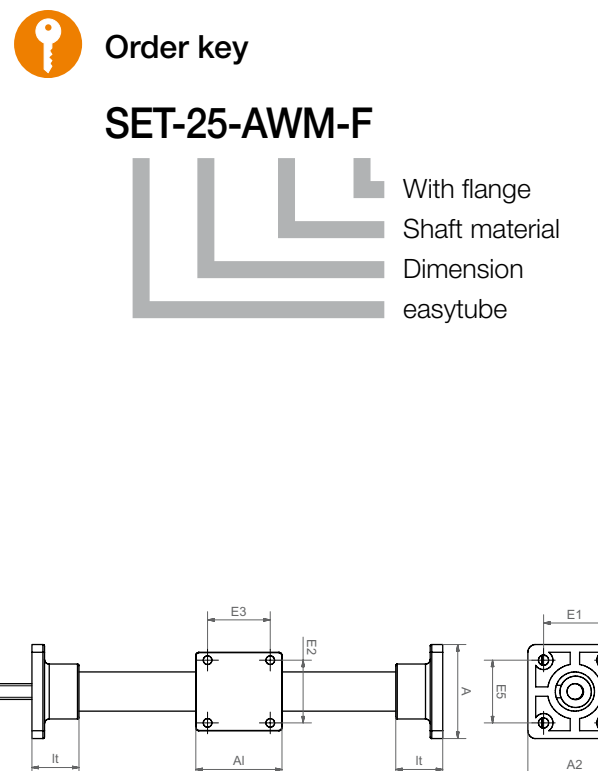
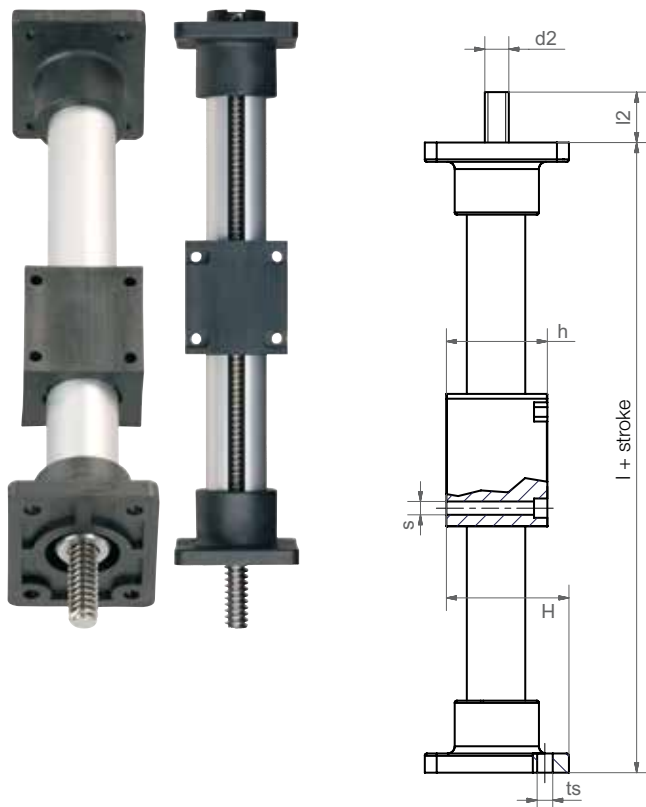
Technical data

Part No.	Max. stroke length	Aluminium shaft			Max. static load capacity	
		Weight shaft end supports and guide carriage		Additional (per 100mm)	Axial	radial
	[mm]	[kg]	[kg]	[kg]	[N]	[N]
SET-12-AWM	200	0.05	0.03		10	20
SET-25-AWM	750	0.15	0.12		150	300
SET-30-AWM	850	0.20	0.21		200	400

Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	E4	I	h	h1	lt	ts	s	sb	l2	d2 <sup>92)</sup>
SET-12-AWM	30	30	23.5	20	20	20	–	60	22	–	15	3.3	4.2	–	10	M4
SET-25-AWM	60	55	44	40	40	40	20	115	39	45	30	5.2	5.2	M4	17	Tr10x2
SET-30-AWM	80	55	49	60	40	40	20	125	39	50	35	6.5	5.2	M4	20	Tr12x3

<sup>92)</sup> Lead screw end unmachined



- Flanged version for axial mounting
- Simple, smooth design
- Available accessories ► **Page 1419**

Technical data

Part No.	Max. stroke length	Aluminium shaft			Max. static load capacity	
		Weight shaft end supports and guide carriage		Additional (per 100mm)	Axial	radial
	[mm]	[kg]	[kg]	[kg]	[N]	[N]
SET-25-AWM-F	750	0.15	0.12		150	300
SET-30-AWM-F	850	0.20	0.21		200	400

Dimensions [mm]

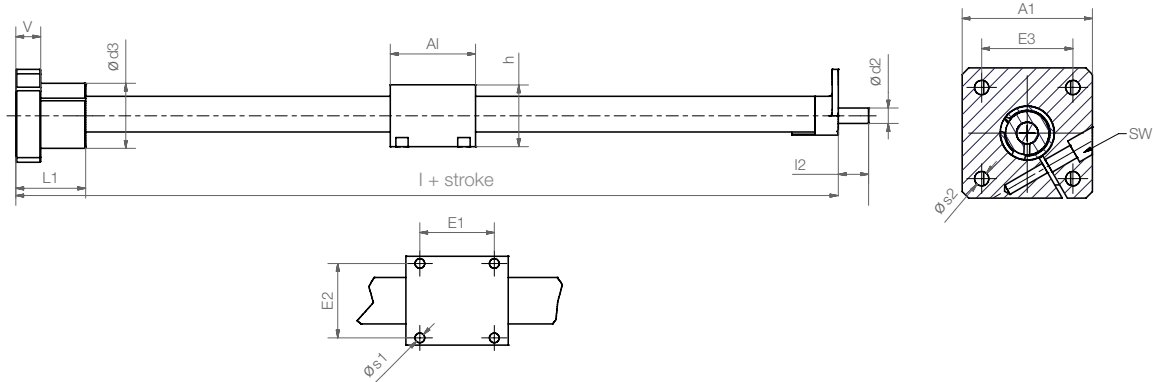
Part No.	Al	A	A2	H	E1	E2	E3	E5	I	h	lt	ts	s	l2	d2 <sup>92)</sup>
SET-25-AWM-F	55	60	60	49	40	40	40	40	115	39	30	5.2	5.2	27	Tr10x2
SET-30-AWM-F	55	60	80	59	60	40	40	40	125	39	35	6.5	5.2	30	Tr12x3

<sup>92)</sup> Lead screw end unmachined



Order key

SETB-25-AWM



- Horizontal and vertical installation at one end
- Ideal for the positioning of sensors and cameras in format adjustments
- Easy assembly
- Flexible installation
- Space-saving
- Protected lead screw

Technical data

Part No.	Max. stroke length	Max. static load capacity	
		Axial	radial <sup>128)</sup>
	[mm]	[N]	[N]
SETB-25-AWM	300	150	12.5

Dimensions [mm]

Part No.	A1	AI	h	E1	E2	E3	V	L1	I2	d2 <sup>92)</sup>	d3	I	s1	s2	SW
SETB-25-AWM	60	55	39	40	40	42	16	45	17	Tr10x2	42	130	5.2	6.6	5

<sup>92)</sup> Lead screw end unmachined

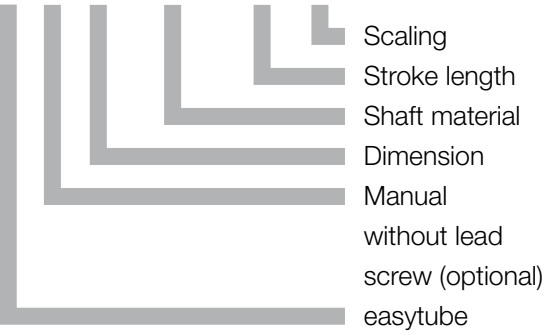
More dimensions upon request

<sup>128)</sup> The supporting torque at the clamping flange must not exceed 10Nm



Order key

SETM-25-AWM-200-SC



- Lasered, wash-proof scale
- Corrosion-resistant
- Multi-position clamp
- Available with/without lead screw
- 3 stroke lengths available from stock

Technical data

F radial	[N]	300
Max. extension at maximum load	[mm]	66
Max. extension at 100N nominal load	[mm]	200
Max. drive force without load	[N]	10
Max. holding force	[N]	100
Max. stroke length	[mm]	600

Dimensions [mm]

Part no. measurement scale without lead screw	Part no. measurement scale with trapezoidal lead screw 10x2	Stroke length
		[mm]
SETM-25-AWM-200-SC	SET-25-AWM-200-SC	200
SETM-25-AWM-400-SC	SET-25-AWM-400-SC	400
SETM-25-AWM-600-SC	SET-25-AWM-600-SC	600

More dimensions see SET ► Page 1330





- Lightweight
- Cost-effective
- Simplified assembly
- Light, clean and quiet



### Order key

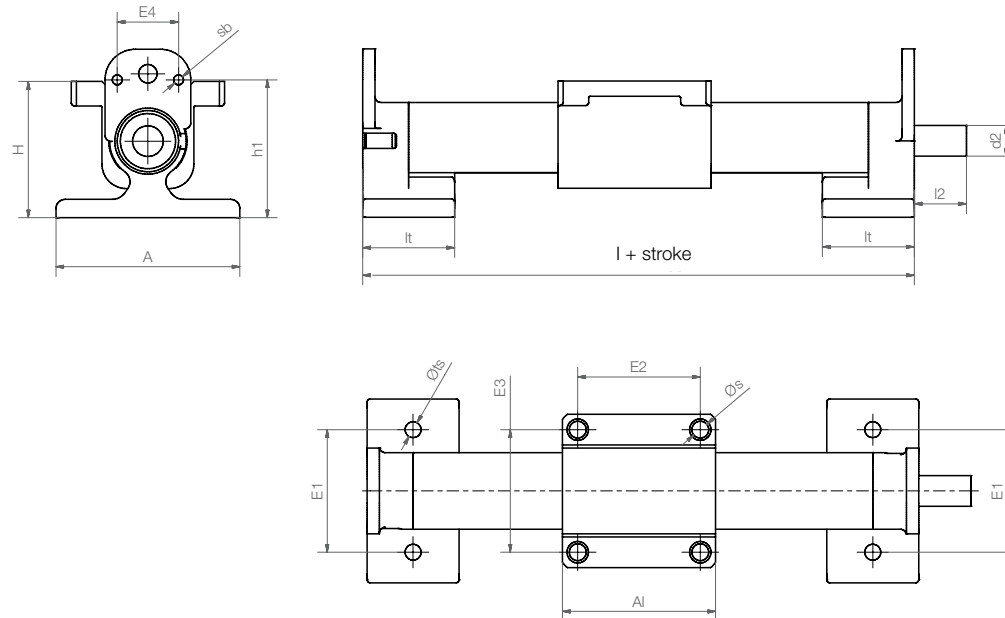
**SETC-25-AWM**



Shaft material

Dimension

easytube



## Technical data

Part No.	Weight	Max. stroke length	Max. static load capacity	
			Axial	radial
	[kg]	[mm]	[N]	[N]
SETC-25-AWM	0.15	750	150	300

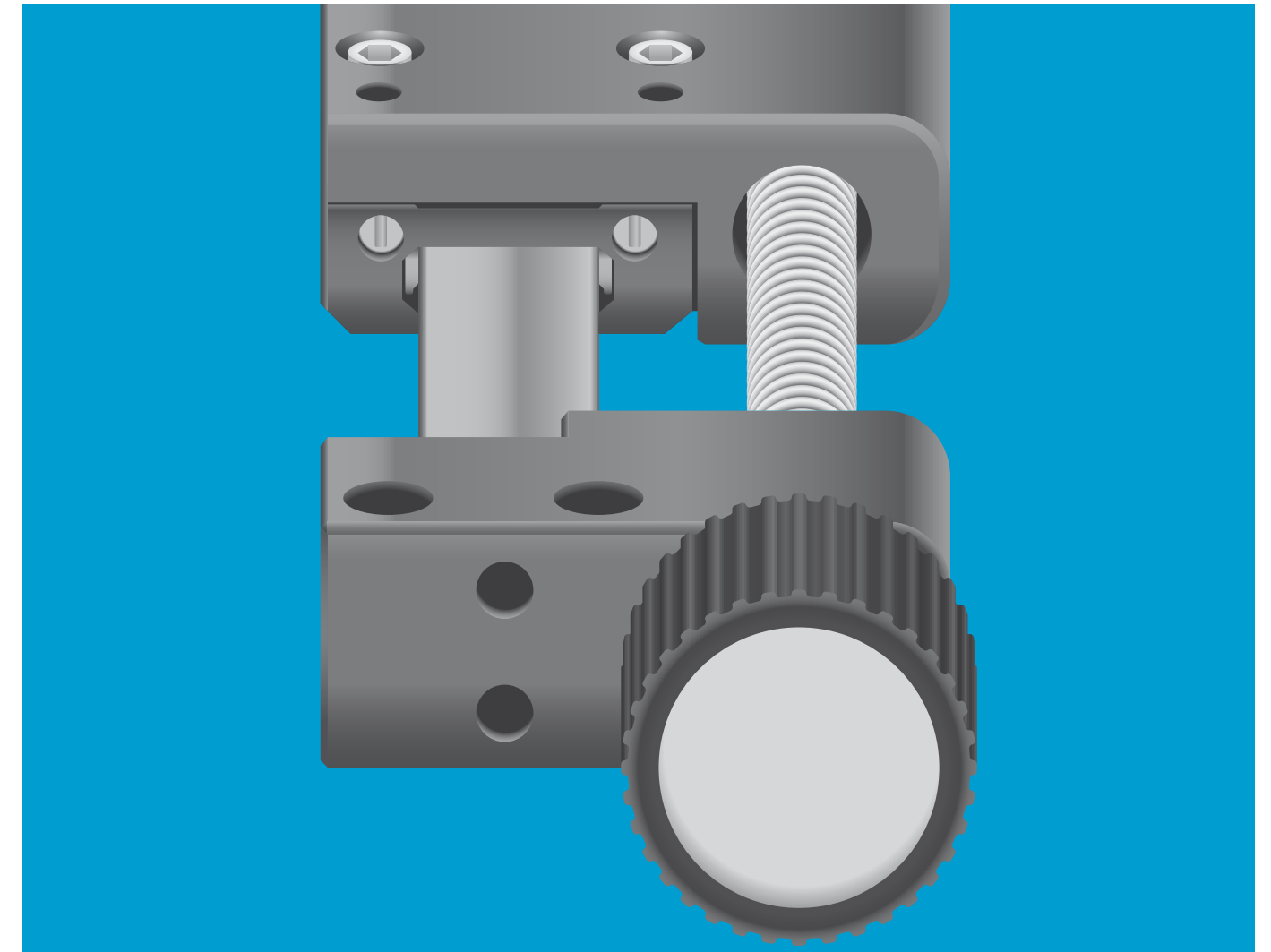
### Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	E4	I	h1	lt	ts	s	sb	l2	d2 <sup>(92)</sup>
<b>SETC-25-AWM</b>	60	55	44	40	40	40	20	115	45	30	5.2	5.2	M4	17	Tr10x2

<sup>92)</sup> Lead screw end unmachined



More dimensions upon request



# drylin® general drive technology – SLT linear modules

Based on lubrication-free drylin® T miniature guide

**Drive: Trapezoidal or high helix lead screw**

## Flat and compact design

### Carriages with individually adjustable clearance

## Variable lead screw options



## Lubrication-free linear modules – drylin® SLT

The low profile, the lateral lead screw arrangement and a striking design, are just some of the reasons why the drylin® SLT linear module was honoured with the 2014 IF Award. Technically, the system impresses with ball bearing mounted trapezoidal or high helix thread lead screws for motorised or manual operation. The basis of the SLT series is the drylin® T miniature guide in sizes 12 and 15.

- Low-profile structure through lateral lead screw arrangement
- Lubrication-free, corrosion-resistant, lightweight
- Variable pitch
- Adjustable drylin® T miniature carriage
- Lead screw arrangement can be selected either left or right

### Typical application areas

- Format adjustments
- Laboratory and medical technology
- Optical equipment



### Available in 3-8 days

Detailed information about delivery time online.



max. +60°C  
Min. -40°C



### Stroke lengths 300mm-600mm

More dimensions upon request.

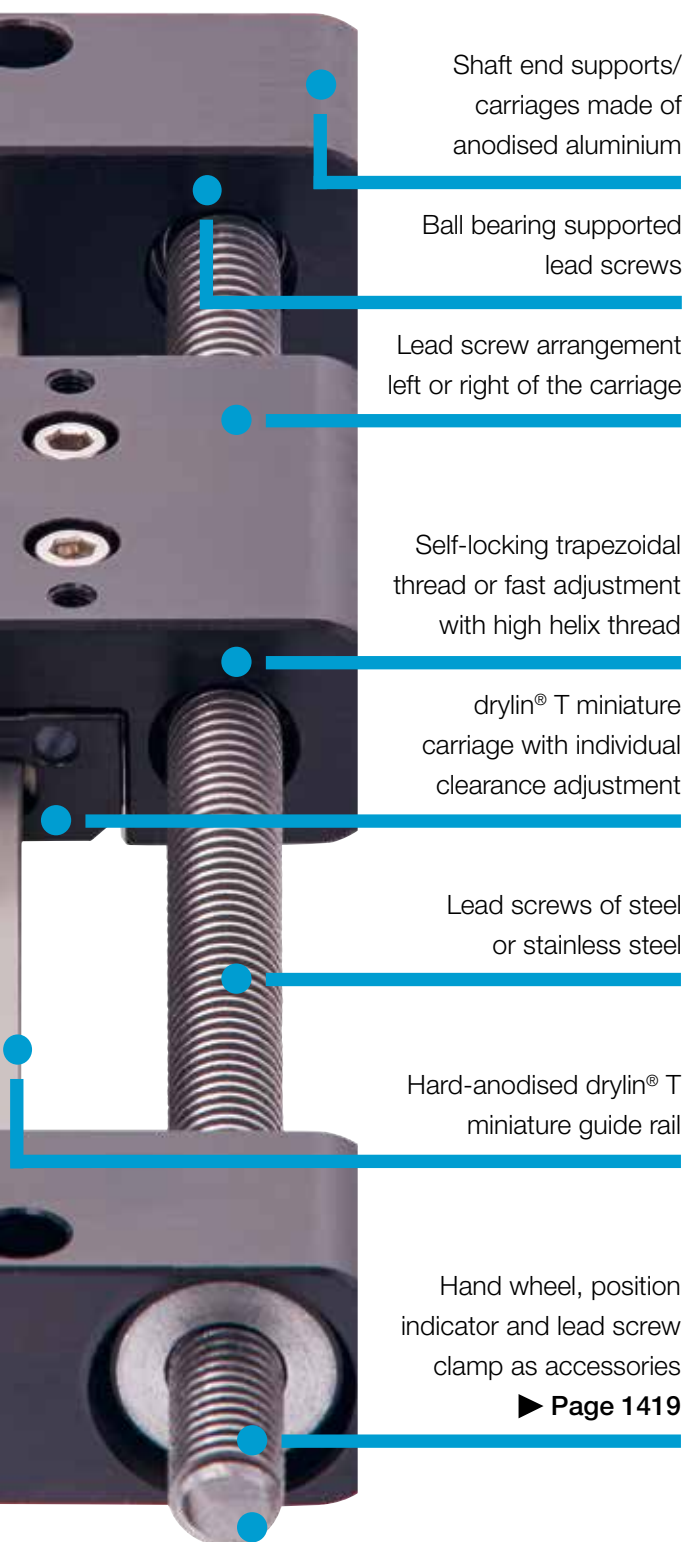


### Product finder

► [www.igus.eu/slt-productfinder](http://www.igus.eu/slt-productfinder)



In accordance with EU Directive 2011/65/EU (RoHS 2)  
Restriction (of the use of certain) hazardous substances



Shaft end supports/  
carriages made of  
anodised aluminium

Ball bearing supported  
lead screws

Lead screw arrangement  
left or right of the carriage

Self-locking trapezoidal  
thread or fast adjustment  
with high helix thread

drylin® T miniature  
carriage with individual  
clearance adjustment

Lead screws of steel  
or stainless steel

Hard-anodised drylin® T  
miniature guide rail

Hand wheel, position  
indicator and lead screw  
clamp as accessories  
► [Page 1419](#)



2013



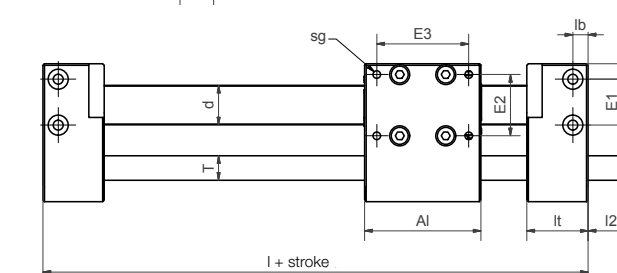
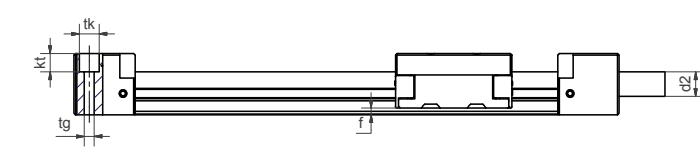
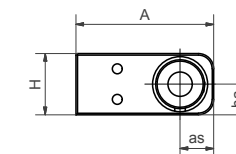
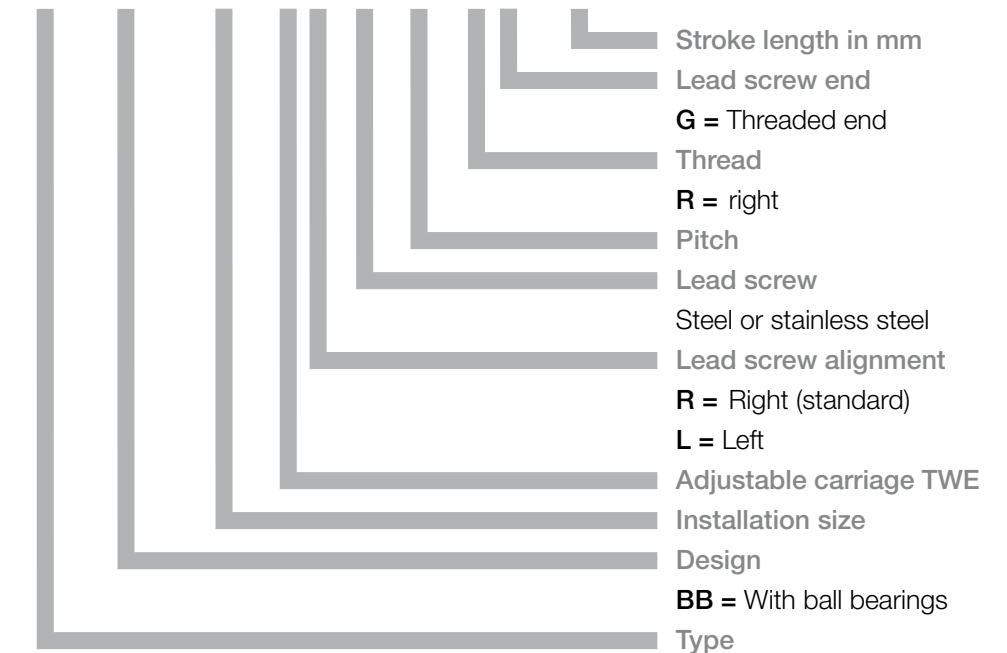
Can be configured  
as ready-to-connect  
linear axis with  
motor and initiators

► [www.igus.eu/drylinE](http://www.igus.eu/drylinE)

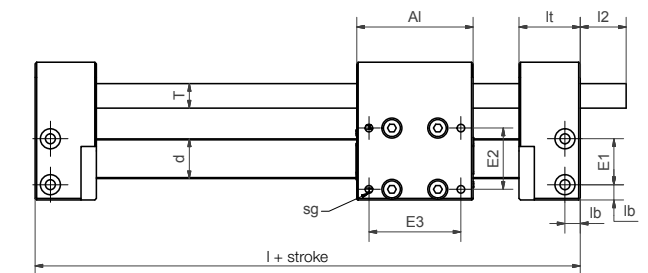


### Order key

SLT-BB-0412-ER-S0015RG-xxx



Lead screw alignment left



Lead screw alignment right

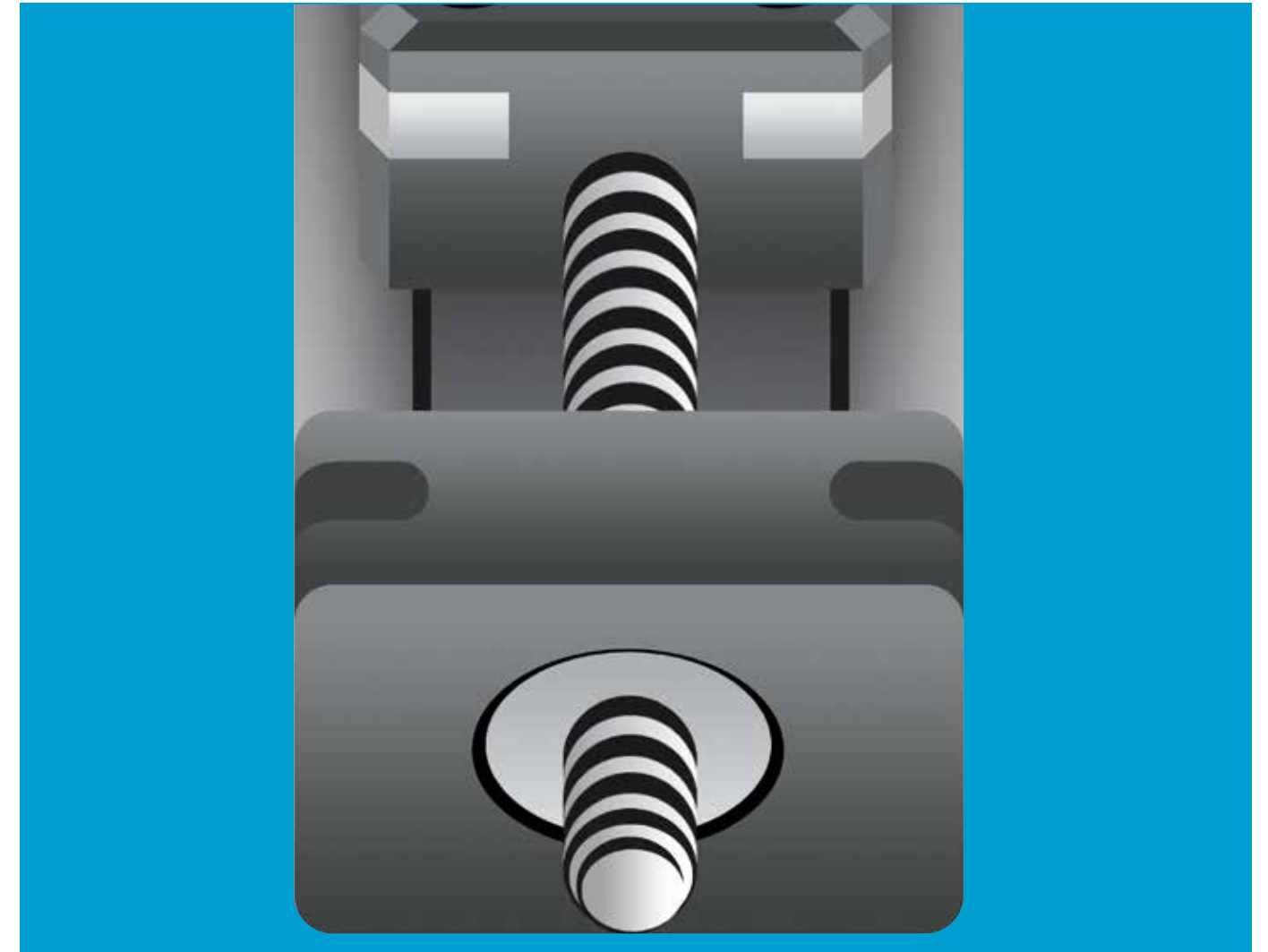
### Technical data and dimensions [mm]

Part No.	Pitch	Max. stroke length	Weight		Max. static load capacity		Max. rpm	Max. speed
			additional (per 100mm)		axial	radial		
			[kg]	[kg]	[N]	[N]	[1/min]	[m/min]
SLT-BB-0412	Tr08x1.5	300	0.15	0.06	100	200	1,000	1.5
	Sg08x15	300	0.15	0.06	25	100	600	9.0
SLT-BB-0415	Tr12x3	600	0.40	0.12	200	400	1,000	4.5
	Tr12x6	600	0.40	0.12	100	400	750	4.5
	Sg12x25	600	0.40	0.12	50	200	300	7.5

Part No.	A	Al	H	E1	E2	E3	I	I2	d2	ha	sg	tk	kt	tg	f	lb	lt	d	T	as
SLT-BB-0412	45	38	20	15	20	30	78	15	-	10	M3-7	6.5	6	M4	2.2	5	20	13	Tr08x1.5	11
SLT-BB-0415	58	45	30	19	25	35	89	17	12	15	M3-13	8	4.5	M5-15	2.8	6.5	22	17	Tr12x3	16

Also see econ chapter ► [Page 1365](#)



## drylin<sup>®</sup> general drive technology – SLN/SLNV linear modules

Based on lubrication-free drylin<sup>®</sup> N low-profile  
linear guide

Drive: Trapezoidal or high helix lead screw

Compact design

Clearance adjustment on carriage

Precise with pre-load






Lubrication-free miniature linear modules – drylin® SLN


drylin® SLN linear axes is a compact solution. The axis measures 28 x 22mm and can be configured with stroke lengths of up to 250mm. Thanks to the lubrication-free plastic sliders, it is quiet and very light. The axis is based on the tried-and-tested drylin® N system, size 27. It is available both mounted on plain bearings or on ball bearings in the shaft end supports. The drylin® SLN linear axis can be adjusted manually using the hand wheel or combined with the drylin® E stepper and DC motors.


- Ultra-compact design
- 3 carriage types (basic/adjustable/pre-load)
- Lubrication-free drylin® low-profile linear guide
- Modular design

Typical application areas

- Sensors
- Inspection technology
- Laboratory technology
- Medical technology

 **Available in 3-8 days**  
Detailed information about delivery time online.

 **Price breaks online**  
No minimum order value. No minimum order quantity.

 **Carriage length: 35mm**  
**Stroke lengths: up to 250mm**

 **Product finder**  
► [www.igus.eu/sln-productfinder](http://www.igus.eu/sln-productfinder)

Shaft end supports made from corrosion-resistant, robust plastic

Lead screw mounted with plain or ball bearings

Cost-effective, robust plastic carriages (basic series 03)

Carriage with manual height clearance adjustment (standard series 04)


Metal thread inserts

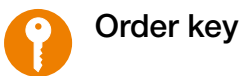
Minimal backlash with pre-load (pre-load series 05)

Rail made from anodised aluminium

Lead screws made from stainless steel with pitch M5 (5x0.8mm) or high helix thread (5x5, 6x12.7)

Hand wheel available  
► [Page 1426](#)

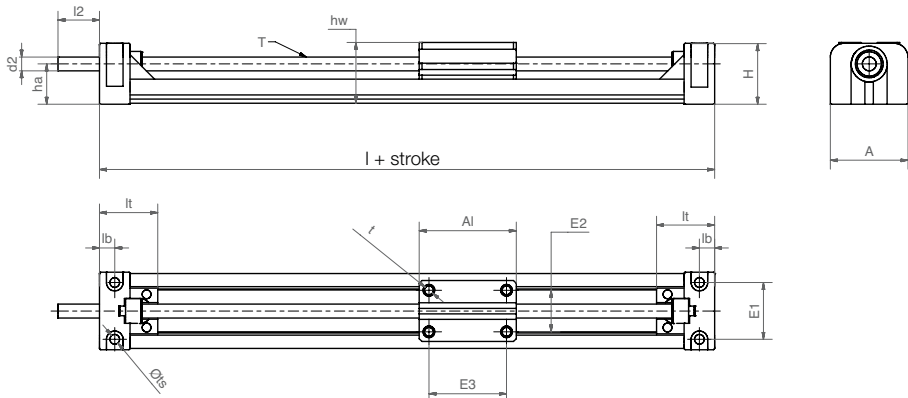
 Configurable with motor as a ready-to-install linear drive (drylin® E ► [Page 1373](#))



Order key  
**SLN-27-14-0008**

- Based on maintenance-free drylin® N low-profile linear guides size 27
- BB version (ball bearing) for low backlash run
- Manual and motorised operation possible
- Linear carriage with individual height clearance adjustment and pre-load (optional)
- Available accessories  
► [Page 1419](#)
- Available with motor  
► [Page 1373](#)
- Also see econ chapter  
► [Page 1370](#)

**Pitch:**  
**0008:** M5x0.8  
**0050:** Sg5x5  
**0025:** Ds6.35x2.54  
**0127:** Sg6.35x12.7  
**0254:** Ds6.35x25.4  
**Carriage version**  
**4:** Standard, adjustable  
**5:** Standard, pre-load  
**Shaft end support design**  
**0:** Plain bearing  
**1:** Ball bearing  
**drylin® N size 27**  
**Linear module**



Technical data

Part No.	Max. stroke length <sup>101)</sup>	Weight [kg]	additional [kg] (per 100mm)	Max. static load capacity		Max. speed [rpm]	Max. drive torque [Nm]
	[mm]			axial [N]	radial [N]		
SLN-27-04	250	0.06	0.04	10	40	100	0.1
SLN-27-05	250	0.06	0.04	10	40	100	0.1
SLN-27-14	250	0.06	0.04	10	40	300	0.1
SLN-27-15	250	0.06	0.04	10	40	300	0.1

Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	E11 <sup>102)</sup>	I	hw	It	lb	ts	d2 <sup>98)</sup>	I2	ha
	±0.2	-0.1	±0.2	±0.15	±0.15	±0.15			±0.2	±0.2			Ø		
SLN-27-04	28	35	21.5	15	15	28	15	77	22	20.2	5	3.5	5	15	14
SLN-27-05	28	35	21.5	15	15	28	15	77	22	20.2	5	3.5	5	15	14
SLN-27-14	28	35	21.5	15	15	28	15	77	22	20.2	5	3.5	Ø4h9 <sup>98)</sup>	15	14
SLN-27-15	28	35	21.5	15	15	28	15	77	22	20.2	5	3.5	Ø4h9 <sup>98)</sup>	15	14

<sup>101)</sup> Fixed stroke lengths for SLN option with ball bearings: 100/150/200/250mm

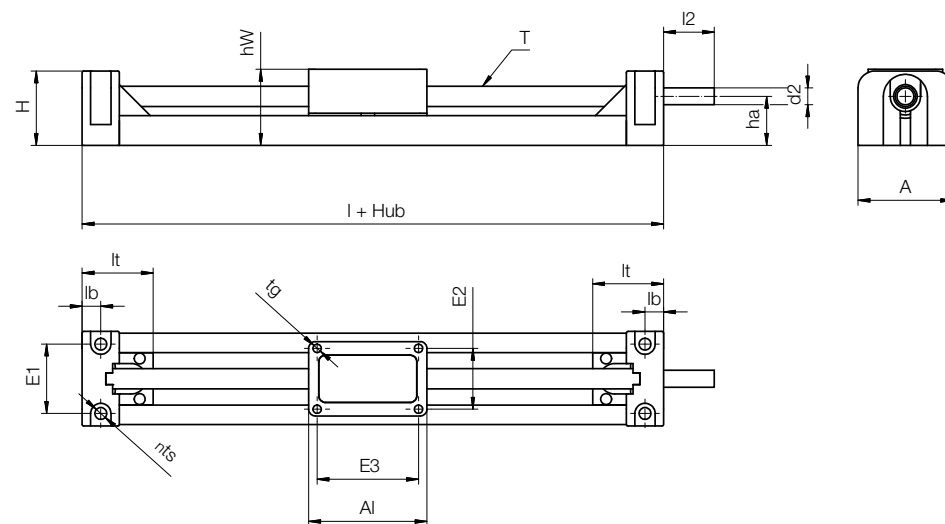
<sup>102)</sup> The dimension E11 can only be found in conjunction with the igus® motor connection <sup>98)</sup> Thread/ remaining thread visible



- SLNV linear module for the smallest applications
- For stroke lengths up to 250mm
- High precision due to stop motion pre-load prism slide
- Clearance reduction in z and y directions due to pre-load
- Lead screw with plain or ball bearing
- Self-locking with trapezoidal thread Tr6x2
- Fast and efficient
- Feed rate up to 25.4mm per rotation

### Typical application areas:

- Medical technology
- Dental equipment
- Research and development
- Measuring technology



### Technical data

Part No.	Max. stroke length [mm]	Weight [kg]	additional [kg] (per 100mm)	Max. static load capacity axial [N]	Max. static load capacity radial [N]	Max. speed [rpm]	Max. drive torque [Nm]
SLNV-27	250	80	56	10	40	300	0.1

### Dimensions [mm]

Part No.	A	A1	H	E1	E2	E3	I	hw	l1	lb	ts	tg	d2 <sup>98)</sup> Ø	l2	ha	T
	±0.2	-0.1	±0.2	±0.15	±0.15	±0.15		±0.2	±0.2							
SLNV-27	28	35	21.5	15	15	30	76	22.5	20.5	5	3.5	M3	5	15	14	6.35x2.54 6.35x5.08 6.35x12.7 6.35x25.4

<sup>98)</sup> Thread/remaining thread visible



## drylin® general drive technology – ZLW toothed belt axes

Lubrication-free linear modules based on drylin® W guides

Drive: toothed belt

For fast positioning

End supports with deep groove ball bearings

As single axis or for multi-axis linear robots



Shaft end supports made from robust plastic with integrated deep groove ball bearing

Deflection axis, square, with tooth rim made of **dry-tech®** high-performance polymer or single-section stainless steel shaft with drive pulley

The complete carriage consists of four lubrication-free drylin® W individual bearing housings and anodised aluminium assembly plates

Carriages available in 3 different lengths

High-profile, torsion-resistant drylin® W double shaft profile, made from hard-anodised aluminium

Abrasion-resistant PU toothed belts with steel reinforcement or Neoprene with fibreglass

Profile grooves for mounting via the slot nuts or the clamping elements

Left or right-hand drive pin, also available as dual-sided pin for linear robot structures



Configurable with motor as a ready-to-install linear drive (drylin® E ► [Page 1373](#))

## Lubrication-free toothed belt axes – drylin® ZLW

The drylin® toothed belt axes in the ZLW series are suitable for many different positioning and adjustment tasks. The lubrication-free drylin® W profile guide acts as a linear guide and a toothed belt acts as a drive. The stroke is freely selectable. Thanks to the lightweight design using plastic and aluminium, drylin® ZLW toothed belt axes have a low mass inertia, making them highly efficient. Whether as an individual system or a linear robot structure, the ZLW series offers the ideal solution in both confined spaces and applications that require a high level of support. All drylin® ZLW toothed belt axes can be ordered ready for connection and configured with drylin® E stepper and DC motors. It is also possible to integrate other motor components.

- Completely lubrication-free operation
- 3 types: econ/basic/standard
- Variable carriage lengths
- Many motor kits available

### Typical application areas

- Medical and laboratory technology
- Handling
- Positioning tasks (pick & place)
- Camera/sensor adjustment
- Machine construction



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



### Carriage lengths: 60-250mm

Carriage widths: 54-107mm

Stroke lengths: up to 3,000mm



### Product finder

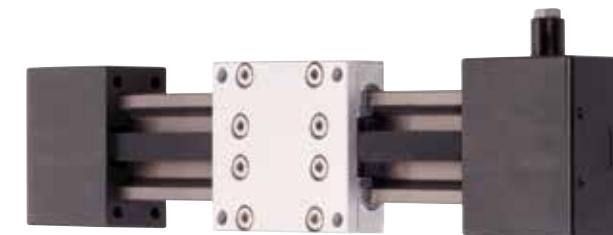
► [www.igus.eu/zlw-productfinder](http://www.igus.eu/zlw-productfinder)



### ZLW econ series

- Cost-effective starter axis in 2 sizes
- Lightweight
- Carriage and deflection housing made of plastic
- Anodised drylin® W aluminium profile section

► [Page 1354](#)



### ZLW basic series

- Cost-effective deflection axis consisting of stainless-steel square section and high-performance polymer
- Neoprene toothed belts with fibre glass reinforcement
- Hard-anodised drylin® W aluminium profile
- For installation sizes 0630 and 1040

► [Page 1354](#)



### ZLW standard series

- Effective PU toothed belt with steel coatings
- Single-section deflection axis made of stainless steel (shaft and tooth rim)
- Hard-anodised drylin® W aluminium profile
- For installation sizes 0630/1040/1080/1660

► [Page 1354](#)



### ZLW specialists

- Deep-freeze LT version for applications down to –30°C
- UW version for underwater use
- SW version for splash water applications
- For installation size 1040

► [Page 1354](#)



### ZLW-OD reverse

- For quick reverse positioning
- Fast right/left adjustment
- Compact due to flat drylin® W double rails
- With angle flange

► [Page 1358](#)



### ZAW – cantilever axis

- Secure mounting of the drive unit
- Traversing of profile section and load
- Fixed end block and floating shaft end support
- Size 1040 for max. stroke up to 1,000mm

► [Page 1413](#)



### ZLW – open design in installation size 20

- Variable shaft span of 120/160/200mm
- Effective deflection axis and toothed belt
- Lightweight aluminium version available
- Corrosion-resistant stainless steel version

► [Page 1356](#)



### Motors and mounting accessories

► [Page 1419](#)



Toothed belt axis	Type	Shaft Ø	Weight		Max. stroke length <sup>120)</sup>	Transmission	Tooth profile	Carriage length
			without stroke	100mm stroke				
ZLW-0630-...		[mm]	[kg]	[kg]	[mm]	[mm/U]		[mm]
...-02-E	econ	□5	0.30	0.08	500	54	HTD 3M	60
...-02-B	Basic	□5	0.38	0.08	1,000	54	HTD 3M	60/100
...-02-S	Standard	□5	0.43	0.08	1,000	54	MTD3	60/100
...-OD-B	Reverse basic	□5	0.40	0.1	1,000	54	HTD 3M	60/100
...-OD-S	Reverse standard	□5	0.45	0.1	1,000	54	HTD 3M	60/100
ZLW-1040-...								
...-02-E	econ	10	0.70	0.14	1,000	66	RPP 3M	100/150/200
...-02-B	Basic	10	0.90	0.14	2,000	66	RPP 3M	100/150/200
...-02-S	Standard	10	1.00	0.14	2,000	70	AT5	100/150/200
...-02-LT	Deep-freeze	10	1.00	0.14	2,000	70	AT5	100/150/200
...-02-UW	Underwater	10	1.00	0.14	1,000	70	AT5	100/150/200
...-02-SW	Splash water	10	1.00	0.14	2,000	70	AT5	100/150/200
...-OD-B	Reverse basic	10	1.00	0.17	1,500	66	RPP 3M	100/150/200
...-OD-S	Reverse standard	10	1.00	0.17	1,500	70	AT5	100/150/200
ZLW-1080-...								
...-02-S	Standard	10	1.30	0.14	2,000	70	AT5	100/150/200
ZLW-1660-...								
...-02-S	Standard	16	4.00	0.5	3,000	120	AT5	100/150/200/250

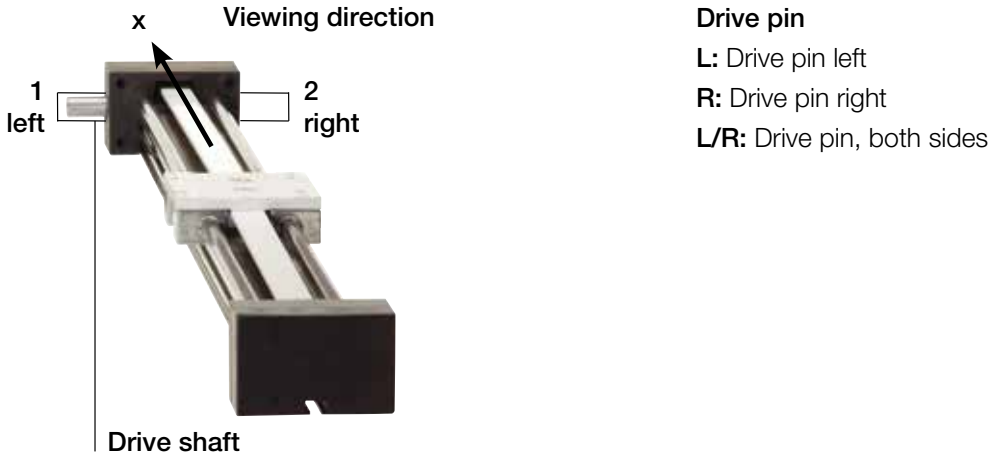
Tightening torque for drylin® connections between metal parts

Metric thread (Da)	Tightening torque	Recommended tightening torque
	[Nm]	[Nm]
M3	0.5-1.1	0.7
M4	1.0-2.8	1.5
M5	2.0-5.5	3.0
M6	4.0-10.0	6.0
M8	8.0-23.0	15.0
M10	22.0-46.0	30.0

Please be aware of the minimal screw-in depth for aluminium and zinc die-casting parts: 1.5 x Da

Max. radial load	Toothed belt material	Toothed belt width	Toothed belt tension	Guide bearing	Max. speed	Max. position variation	Idle torque	Max. drive torque
[N]		[mm]	[N]		[m/s]	[mm]	[Nm]	[Nm]
30	Neoprene with fibre glass	9	20	Deep groove ball bearing	1.0	± 0.40	0.10	0.30
100	Neoprene with fibre glass	9	75	Deep groove ball bearing	2.0	± 0.35	0.10	0.75
150	PU with steel	9	100	Deep groove ball bearing	2.0	± 0.30	0.15	1.00
50	Neoprene with fibre glass	9	75	Deep groove ball bearing	1.0	± 0.35	0.10	0.75
75	PU with steel	9	100	Deep groove ball bearing	1.0	± 0.30	0.15	1.00
100	Neoprene with fibre glass	15	50	Deep groove ball bearing	2.0	± 0.35	0.1	0.5
200	Neoprene with fibre glass	16	150	Deep groove ball bearing	3.0	± 0.30	0.2	1.75
300	PU with steel	16	200	Deep groove ball bearing	5.0	± 0.20	0.3	2.40
300	TPUKF2	16	200	Cold ball bearing	5.0	± 0.20	0.3	2.40
100	PU + Aramid	16	50	xiros® ball bearings	1.0	± 0.50	0.15	0.50
200	PU + stainless steel	16	200	Stainless steel ball bearing	5.0	± 0.20	0.30	2.40
100	Neoprene with fibre glass	16	150	Deep groove ball bearing	1.5	± 0.30	0.15	1.75
150	PU with steel	16	200	Deep groove ball bearing	2.5	± 0.20	0.25	2.40
300	PU with steel	16	200	Deep groove ball bearing	5	± 0.20	0.25	2.40
2,000	PU with steel	32	500	Deep groove ball bearing	5	± 0.20	0.4	10.00

Drive pin alignment for all ZLW toothed belt axis



<sup>120)</sup> When configuring your linear module, we ask that you note the igus® specifications for maximum stroke lengths. The performance and load specifications shown above for all drive units are based exclusively on stroke lengths within the recommended values. Exceeding these can result in undesirable effects to the function such as increased wear and noise. Belt or lead screw contact cannot be excluded, and the rated performance and load specifications may not be attainable.

## drylin® ZLW-0630 | Technical Data

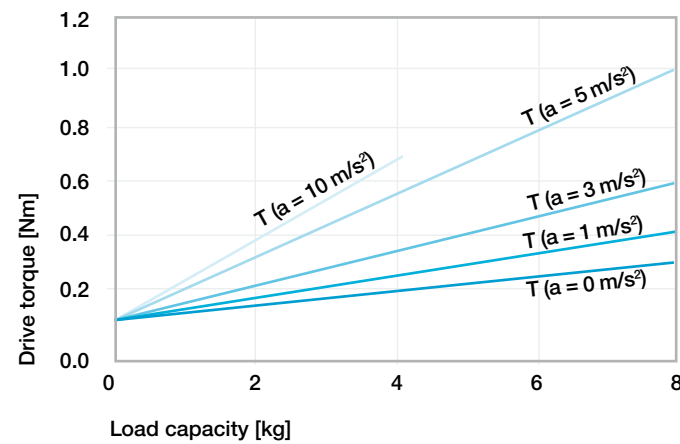


Diagram 01: Required drive torque<sup>138)</sup>; horizontal orientation – ZLW-0630, basic 02 version

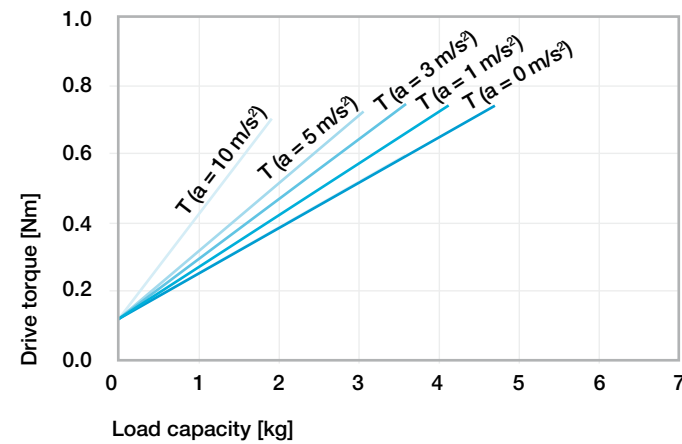


Diagram 02: Required drive torque<sup>138)</sup>; vertical orientation – ZLW-0630, basic 02 version

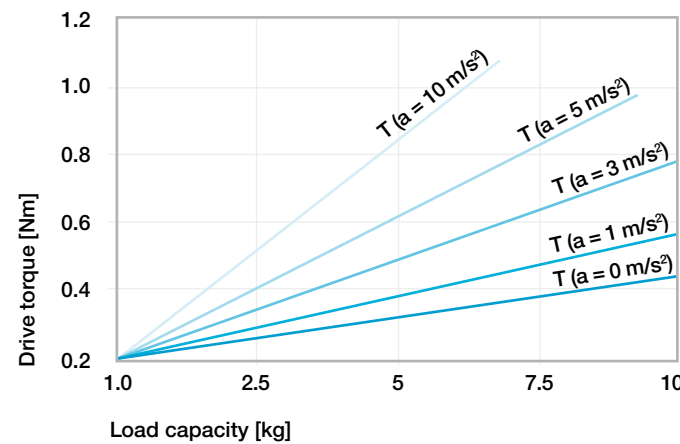


Diagram 03: Required drive torque<sup>138)</sup>; horizontal orientation – ZLW-0630, standard 02 version

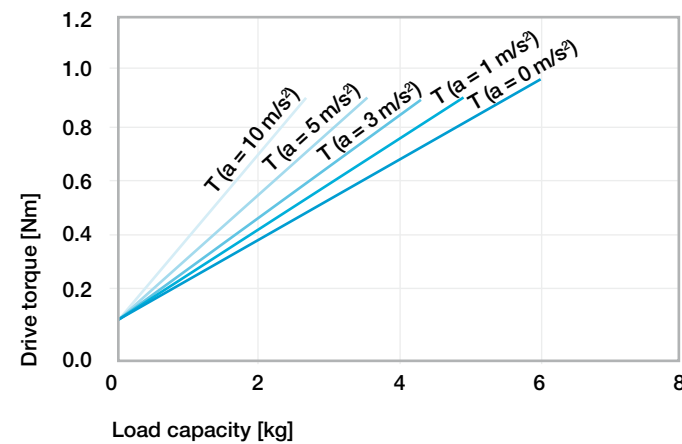


Diagram 04: Required drive torque<sup>138)</sup> vertical orientation – ZLW-0630, standard 02 version

<sup>138)</sup> Assumption: the moving mass is located in a circumscribed circle with a max. R = 100mm to the middle of the guiding rail, max. permissible torque ZLW-0630 basic 02: 0.75Nm,  $a = 0\text{ m/s}^2$ , ZLW-0630 standard 02: 1Nm,  $a = 0\text{ m/s}^2$ , constant drive without nominal acceleration value

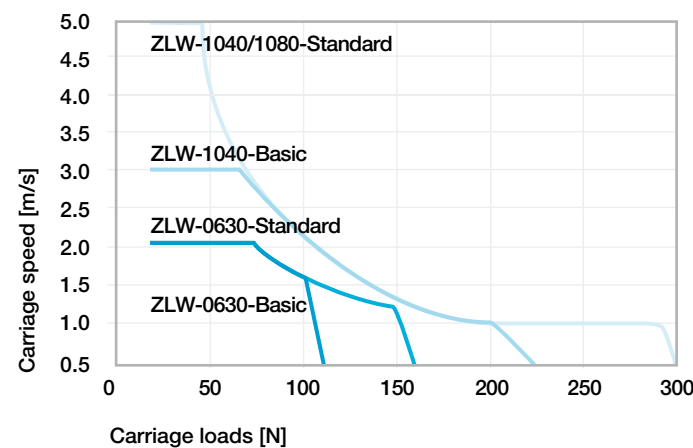


Diagram 05: Maximum load compared: ZLW-0630 and ZLW-1040/1080, 100% OT (On-time). The graph accounts for the sum of all forces active on the carriage.

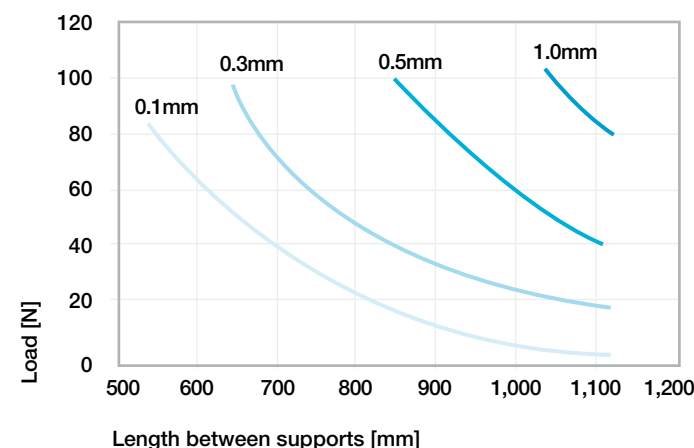


Diagram 06: Sag between unsupported end blocks ZLW-0630, basic 02 and standard 02 version. Sag permissible up to 2mm maximum.

## drylin® ZLW-1040/1080 | Technical data

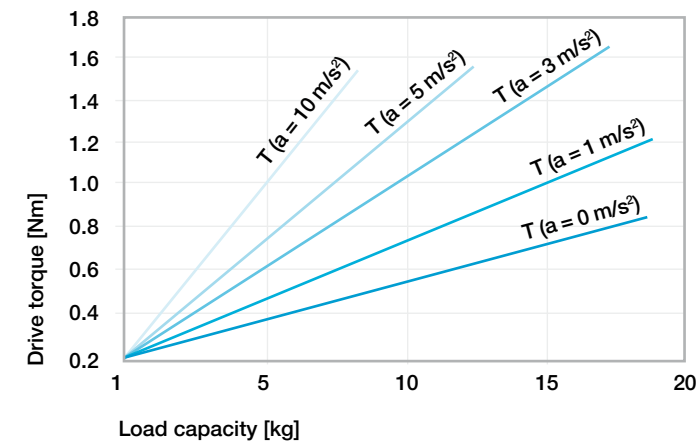


Diagram 07: Required drive torque<sup>139)</sup>; horizontal orientation – ZLW-1040, basic 02 version

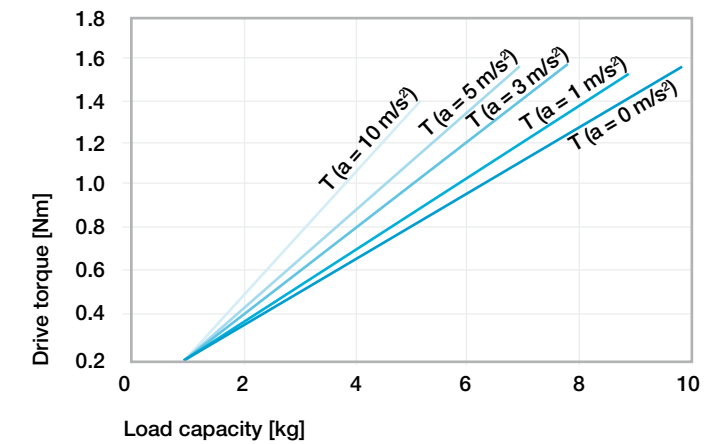


Diagram 08: Required drive torque<sup>139)</sup>; vertical orientation – ZLW-1040, basic 02 version

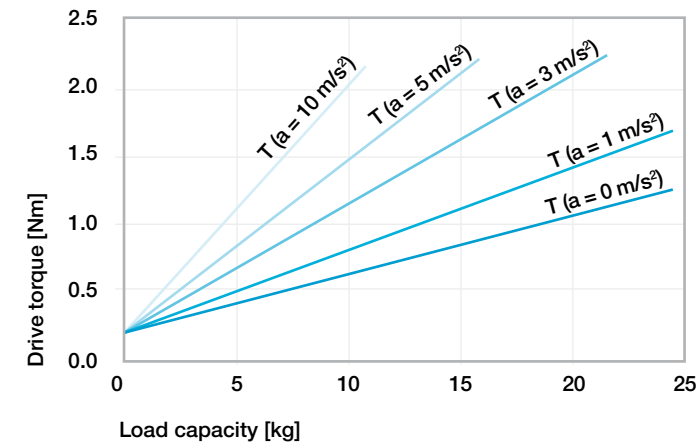


Diagram 09: Required drive torque<sup>139)</sup>; horizontal orientation – ZLW-1040/1080, standard 02 version

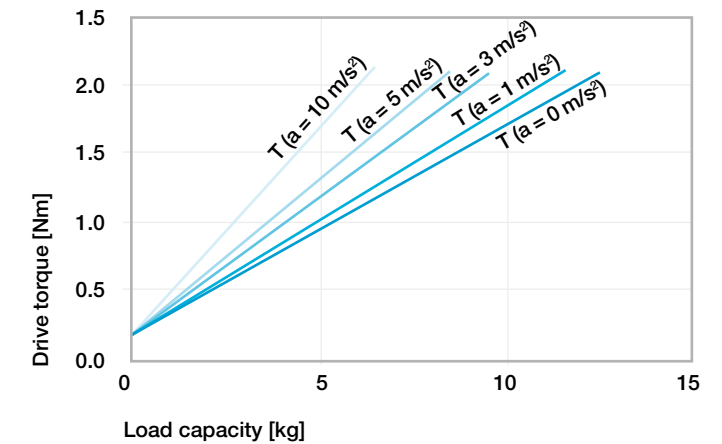


Diagram 10: Required drive torque<sup>139)</sup>; vertical orientation – ZLW-1040/1080, standard 02 version

<sup>139)</sup> Assumption: The moving mass is located in a circumscribed circle with a max. R = 100mm to the middle of the guiding rail, max. permissible torque ZLW-1040/1080 basic 02: 1.75Nm,  $a = 0\text{ m/s}^2$ , ZLW-1040/1080 standard 02: 2.4Nm,  $a = 0\text{ m/s}^2$ , constant drive without nominal acceleration value

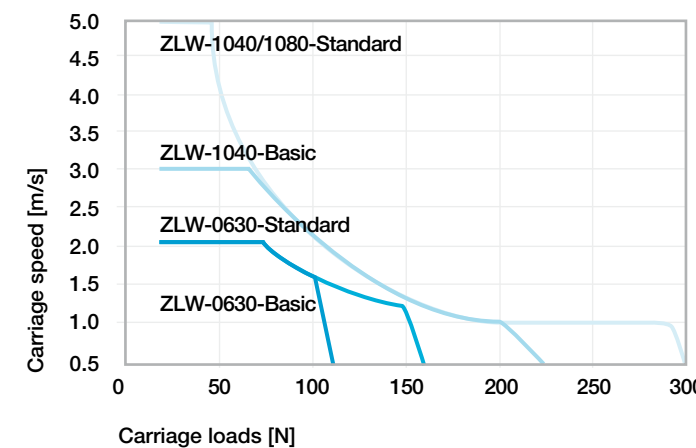


Diagram 11: Maximum load compared: ZLW-0630 and ZLW-1040/1080, 100% OT (On-time). The graph accounts for the sum of all forces active on the carriage.

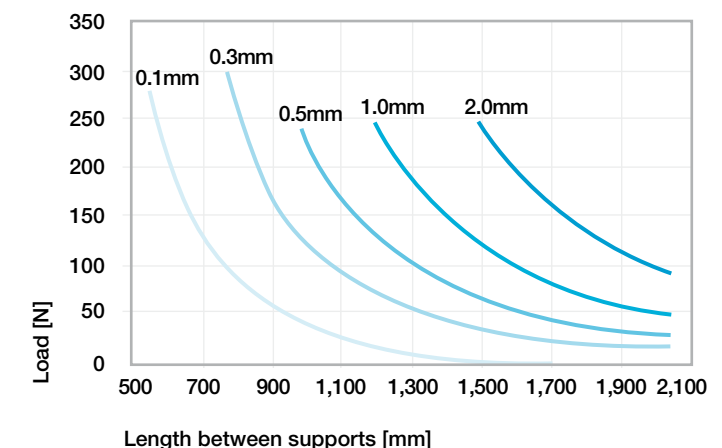


Diagram 12: Sag between unsupported end blocks ZLW-1040, basic version and ZLW-1040/1080 standard 02 version. Sag permissible up to 2mm maximum – horizontal orientation

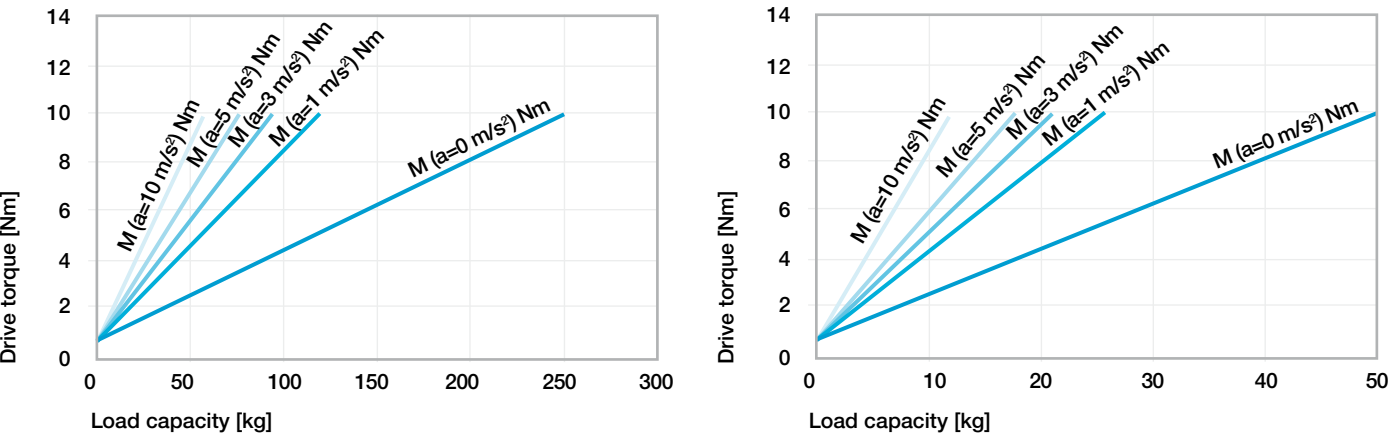


Diagram 13: Required drive torque<sup>140)</sup>; horizontal orientation – ZLW-1660, standard 02 version

Diagram 14: Required drive torque<sup>140)</sup> vertical orientation – ZLW-1660, standard 02 version

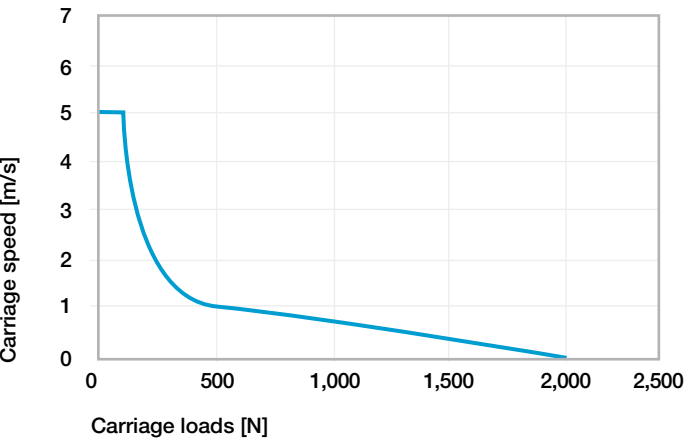


Diagram 15: Maximal load, horizontal installation; the graph accounts for the sum of all forces active on the carriage.

<sup>140)</sup> Assumption: The moving mass is located in a circumscribed circle with R = 100mm to the middle of the guiding rail, max. permissible torque ZLW-1660 standard 02: 10Nm, a = 0m/s², constant drive without nominal acceleration value

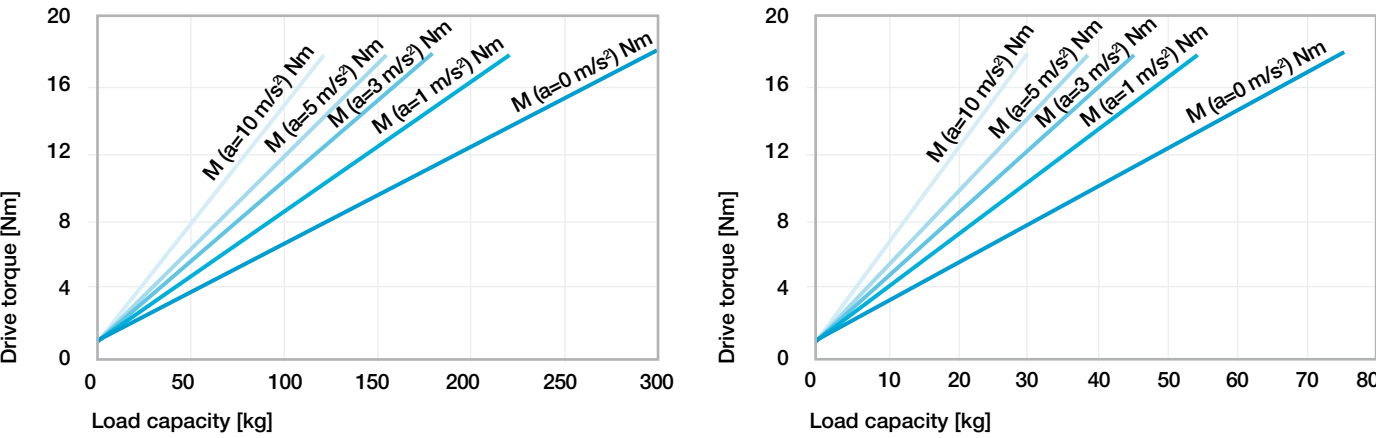


Diagram 16: Required drive torque<sup>140)</sup>; horizontal orientation – ZLW-20120, standard 02 version

Diagram 17: Required drive torque<sup>140)</sup>; vertical orientation – ZLW-20120, standard 02 version

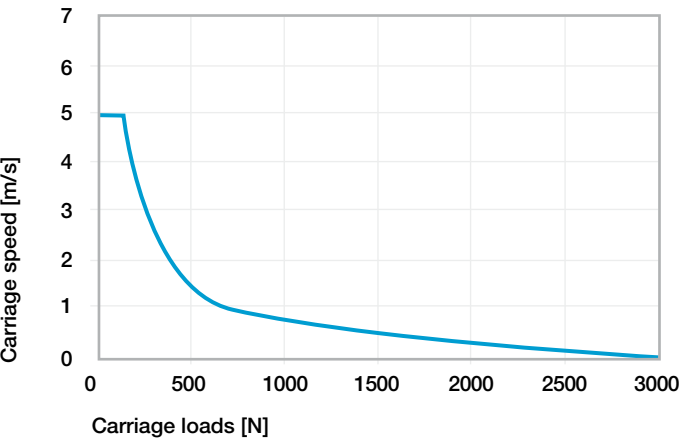


Diagram 18: Maximal load, horizontal installation; the graph accounts for the sum of all forces active on the carriage.

<sup>140)</sup> Assumption: The moving mass is located in a circumscribed circle with R = 100mm to the middle of the guiding rail, max. permissible torque: 20Nm, a = 0m/s², constant drive without nominal acceleration value

Technical data

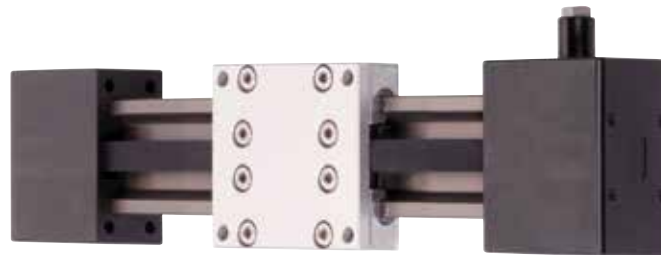
Part No.	Geometrical moment of inertia		Moment of resistance	
	Iy	Iz	Wby	Wbz
ZLW-0630	30,391	11,674	1,736	845
ZLW-0660	212,826	17,018	6,448	1,398
ZLW-1040	97,560	54,910	3,902	3,076
ZLW-1080	483,653	486,613	11,515	4,684
ZLW-1660	540,876	4,773,489	14,618	24,586





## econ series

Many infeed movements require cost-effective linear axes that focus on pure adjustment tasks. This econ series with toothed belt was developed for the fast positioning of light loads. By the compact design and low weight due to aluminium and plastic, the ZLW econ is the perfect alternative to self-made solutions.



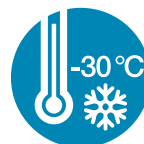
## Basic series

Lubrication-free linear guide also driven by a toothed belt made from fibre-glass reinforced neoprene (black). The drive shaft, consisting of a square stainless steel and toothed pulley made of high-performance polymer, rests on 2 deep groove ball bearings. The drive pin is 6x6mm square and made of stainless steel. The scope of supply includes a plastic adapter for a pin diameter of 10mm.



## Standard series

The lubrication-free linear guide is also driven by a toothed belt made from steel reinforced polyurethane (white). Deflection shaft and drive pulley (single-piece) are made from plated steel or stainless steel. The pulley shafts are mounted in two deep groove ball bearings.



## The ZLW specialists

LT – for use at temperatures down to  $-30^{\circ}\text{C}$ , the drive and deflection shaft end supports are fitted with cold ball bearings. Drive is a toothed belt suitable for low temperatures.



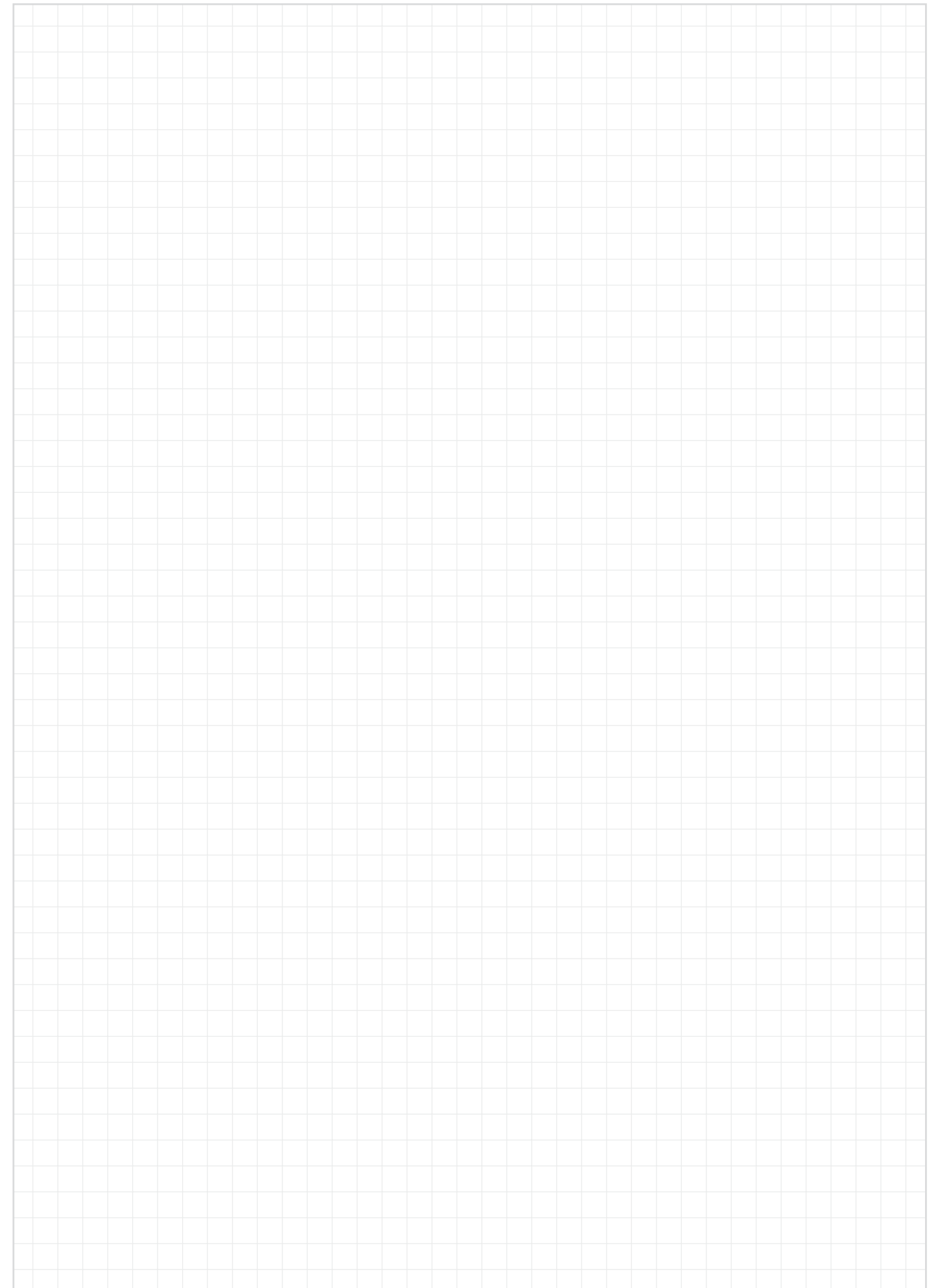
SW - the SW ZLW version is suitable for applications where there is contact with spray water. Corrosion-resistant due to PU toothed belt with stainless steel tie beams and stainless steel ball bearings, as well as shaft end support housing made of anodised aluminium.



UW - maximum protection against corrosion is provided by the toothed belt axis; for underwater applications, among others. Linear carriages, drive and deflection shaft end supports made of anodised aluminium, incl. lubrication-free xiros® ball bearings. A flexible toothed belt with aramid tie beams serves as the belt.

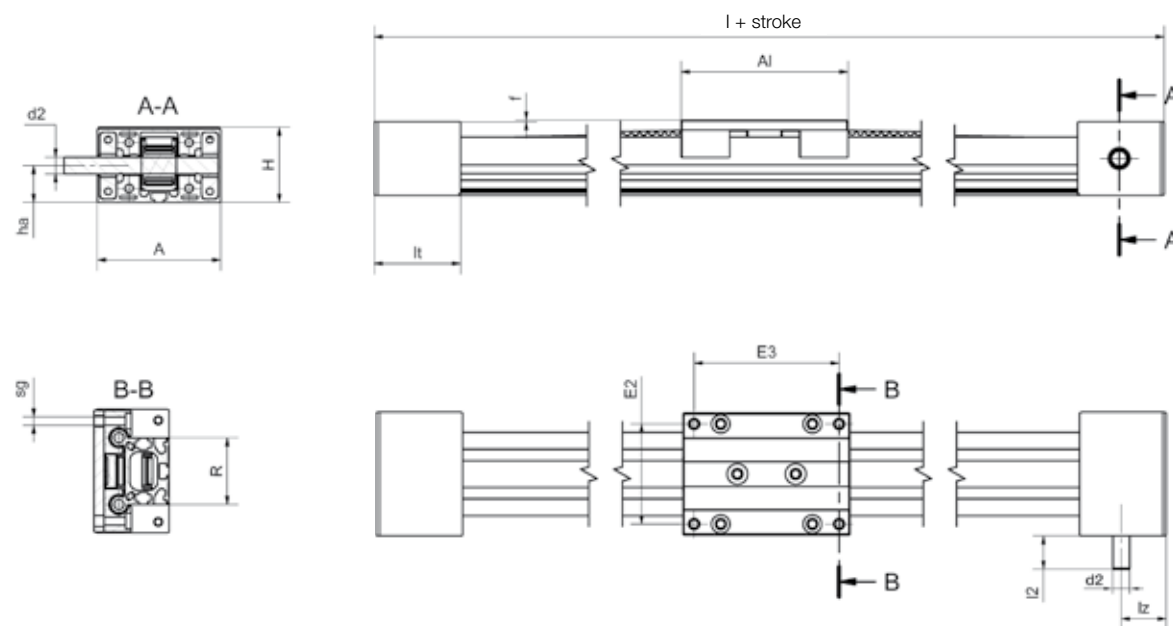


More Information online  
[www.igus.eu/ZLW](http://www.igus.eu/ZLW)

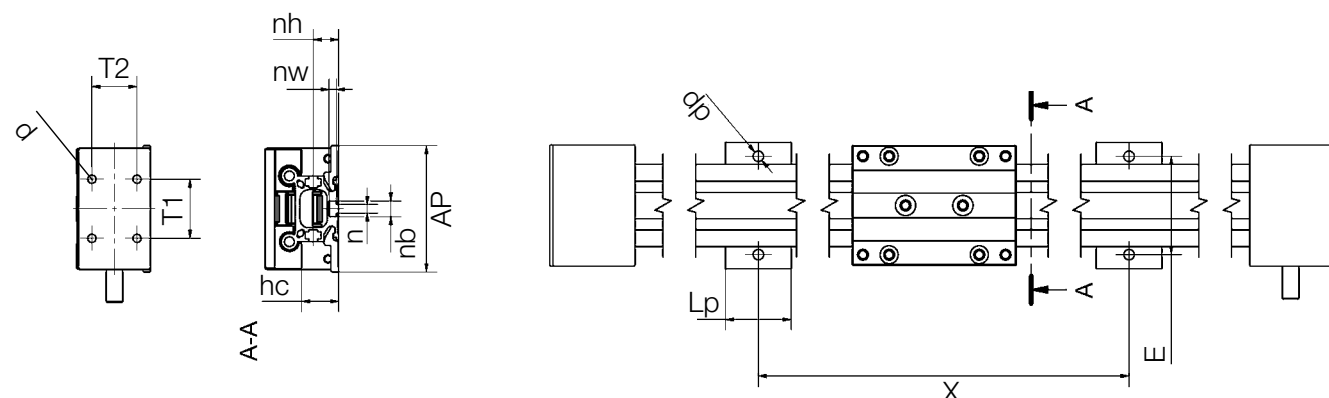




- Fast positioning of small loads
- Quiet operation and flat design
- Drive pin on one or both sides
- Linear carriages available in different lengths (except for econ version)
- Configurable with motor as a ready-to-install linear drive ► **Page 1390**
- Specialist in deep-freeze, underwater and spray-water areas ► **Page 1313**



## Connecting dimensions



## Order key

ZLW-0630-02-B



## Design

**E:** econ series (0630/1040)**B:** basic series (0630/1040)**S:** standard series (all sizes)

## Type

**02:** With deep groove ball bearings

## Installation size

Toothed belt axis



## Order key specialists

ZLW-1040-LT-02-S



## Design

**S:** Standard series

## Type

**02:** With deep groove ball bearings

## Options

**LT:** For deep-freeze applications down to -30°C**UW:** For underwater applications**SW:** for spray-water applications

## Installation size

Toothed belt axis

## Dimensions [mm]

Part No.	A	AI	H	E2	E3	I	R	f	lt	sg	ha	hc	lz	l2	d2
	-0.3			±0.15	±0.15		±0.15		±0.3						h9
ZLW-0630-02	54	60	31	45	51	144	30	3	42	M4	14	22.5	20.5	20	8
ZLW-0660	85	100	31	76	91	184	61	3	42	M4	14	22.5	20.5	19.5	8
ZLW-1040-02	74	100	44	60	87	204	40	1	52	M6	22	22.5	27	20	10
ZLW-1040-LT-02-S	74	100	44	60	87	204	40	1	52	M6	22	22.5	27	20	10
ZLW-1040-UW-02-S	74	100	44	60	87	204	40	1	52	M6	22	22.5	27	20	10
ZLW-1040-SW-02-S	74	100	44	60	87	204	40	1	52	M6	22	22.5	27	20	10
ZLW-1080-02	90	100	44	94	87	204	74	1	52	M6	22	22.5	24.5	12	10
ZLW-1660-02	104	100	72	86	82	252	60	2	76	M8	43	22.5	38	20	14

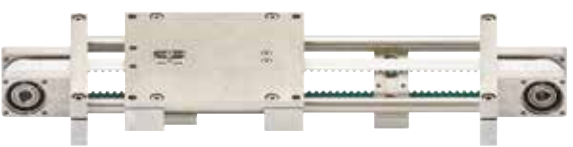
## Connecting dimensions [mm]

Part No.	X	E	AP	Lp	dp	n	nb	nw	nh	T1	T2	d
		±0.2	-1.0							±0.25	±0.25	
ZLW-0630-02 <sup>109)</sup>	variable	40	52	15	5.5	-	-	4.3	7	20	21	3.2
ZLW-0660	variable	40	52	15	5.5	5.2	9.5	4.3	7	20	21	3.2
ZLW-1040-02	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0
ZLW-1040-LT-02-S	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0
ZLW-1040-UW-02-S	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0
ZLW-1040-SW-02-S	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0
ZLW-1080-02	variable	94	111	40	6.4	5.2	9.5	4.36	15.5	36	27	M6
ZLW-1660-02	variable	100	122	40	9	10	15.4	13	27.6	65	60	M5

<sup>109)</sup> Basic version: 6mm square, plastic adapter for pin diameter 10mm included

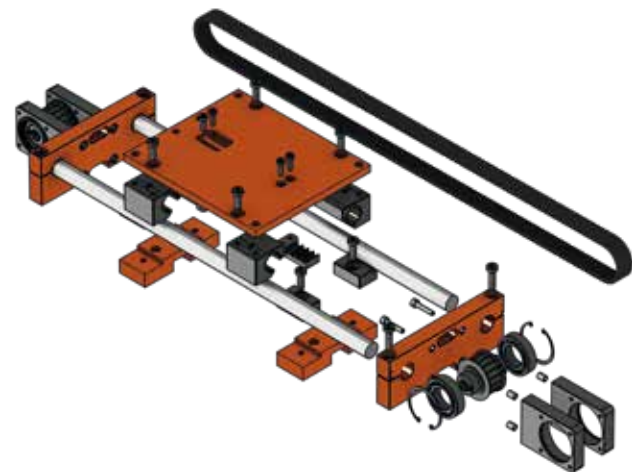


Aluminium version



Stainless steel version

- High speed with ball bearing supported drive shaft
- Robust wide round belt
- Central belt adjustment at the carriage
- Based on lubrication-free drylin® W linear guide
- Variable motor connection due to solid and hollow shafts



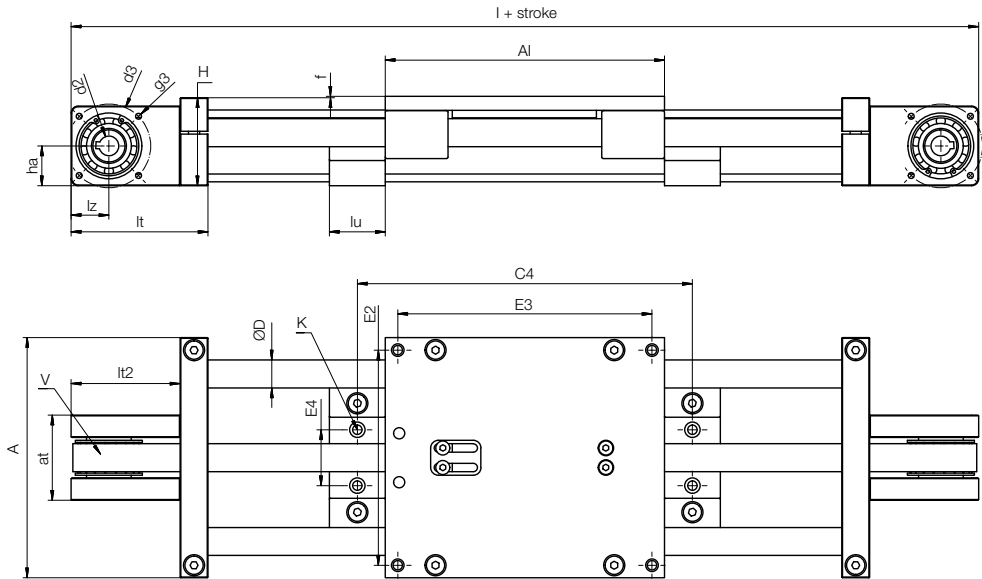
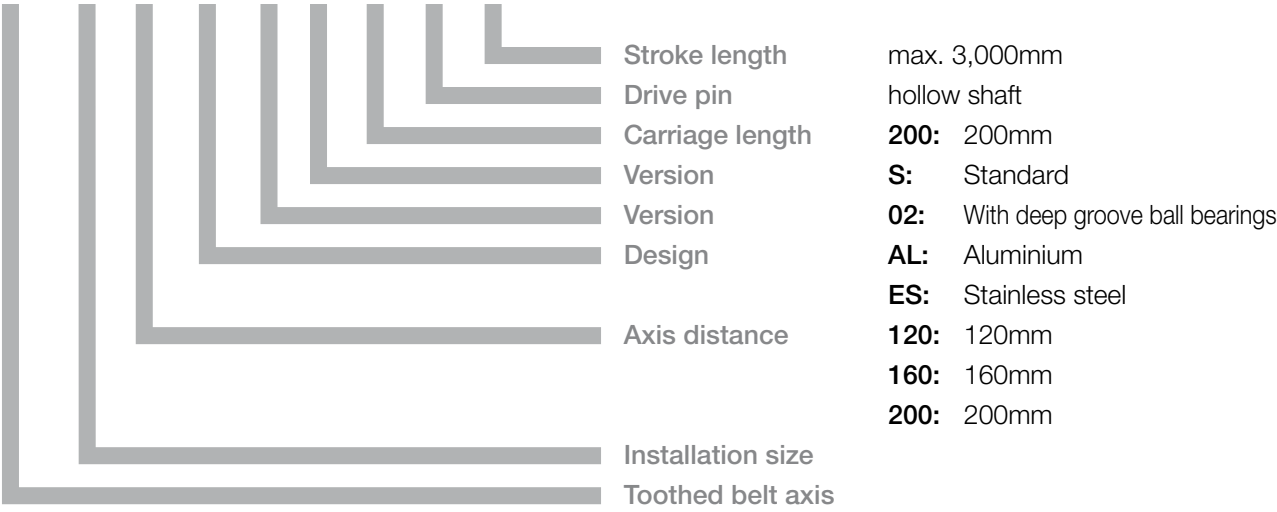
Technical data

Part No.	Max. stroke length	Transmission	Tooth profile	Toothed belt	
	[mm]			Material	Tension
		[mm/U]			[N]
ZLW-10120	2,000	75	3M	Neoprene with fibre glass	200
ZLW-10160	2,000	75	3M	Neoprene with fibre glass	200
ZLW-10200	2,000	75	3M	Neoprene with fibre glass	200
ZLW-20120	3,000	144	8M	PU with stainless steel reinforcement	750
ZLW-20160	3,000	144	8M	PU with stainless steel reinforcement	750
ZLW-20200	3,000	144	8M	PU with stainless steel reinforcement	750



Order key

ZLW-20120-AL-02-S-200-H-2000



Dimensions [mm]

Part No.	A	AI	H	E2	E3	E4	C4	f	It	ha	lz	l	d2
													h7
ZLW-10120	153	150	40	140	137	40	240	1	74	18.0	18	198	10
ZLW-10160	193	150	40	180	177	90	240	1	74	18.0	18	198	10
ZLW-10200	233	150	40	220	217	120	240	1	74	18.0	18	198	10
ZLW-20120	172	200	63	154	182	40	240	–	98	28.5	27	396	14
ZLW-20160	212	200	63	194	182	80	240	–	98	28.5	27	396	14
ZLW-20200	252	200	63	234	182	120	240	–	98	28.5	27	396	14

Part No.	d3	g3	D	K	at	It2	lu	V
				For DIN912 - M6				[mm/rev]
ZLW-10120	38	M4	10	M6 <sup>158)</sup>	43	59	20	75
ZLW-10160	38	M4	10	M6 <sup>158)</sup>	43	59	20	75
ZLW-10200	38	M4	10	M6 <sup>158)</sup>	43	59	20	75
ZLW-20120	60	M5	20	M8	61	78	40	144
ZLW-20160	60	M5	20	M8	61	78	40	144
ZLW-20200	60	M5	20	M8	61	78	40	144

<sup>158)</sup> For DIN912 - M5

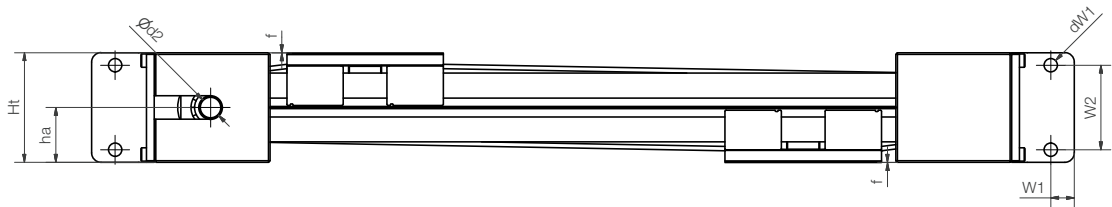


# drylin® ZLW | Toothed belt axes | Product range

Opposite drive toothed belt with angle flange

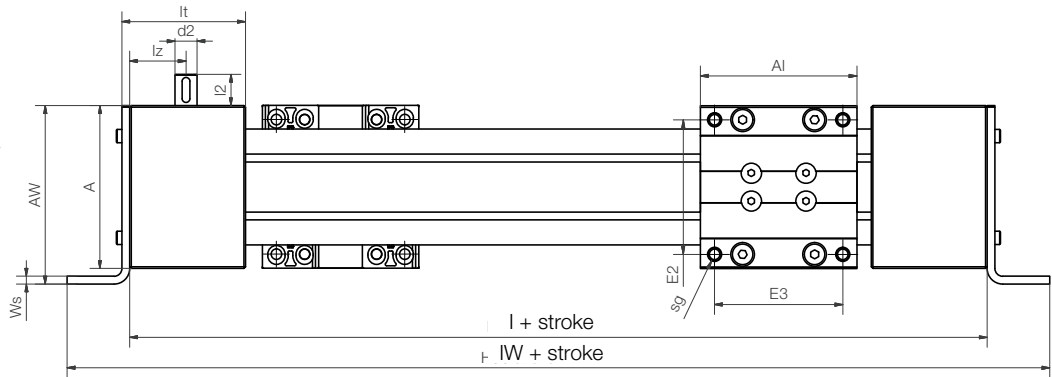


- Quick reverse positioning
- Fast right/left adjustment
- Available as standard and basic version
- Incl. angle flange for fixing
- Individual stroke lengths up to max. 3,000mm
- Radial loads up to 200N

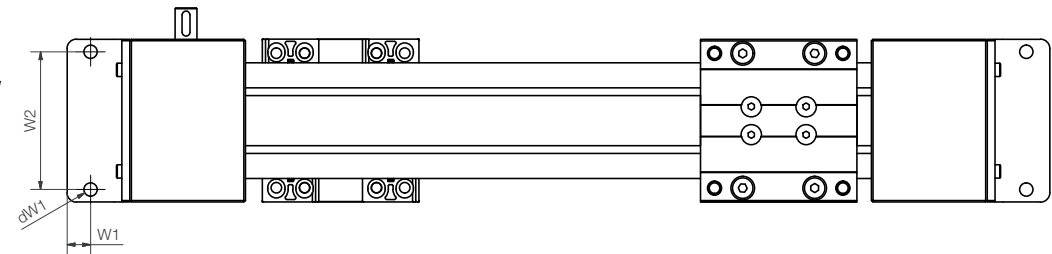


Angle flange alignment:

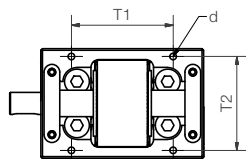
**Option 02**  
mounted on the side, ZLW  
alignment on the edge



**Option 04**  
mounted horizontally, ZLW  
alignment horizontal



**Option 03**  
mounted on the front



# drylin® ZLW | Toothed belt axes | Product range



Order key

ZLW-1040-OD-02



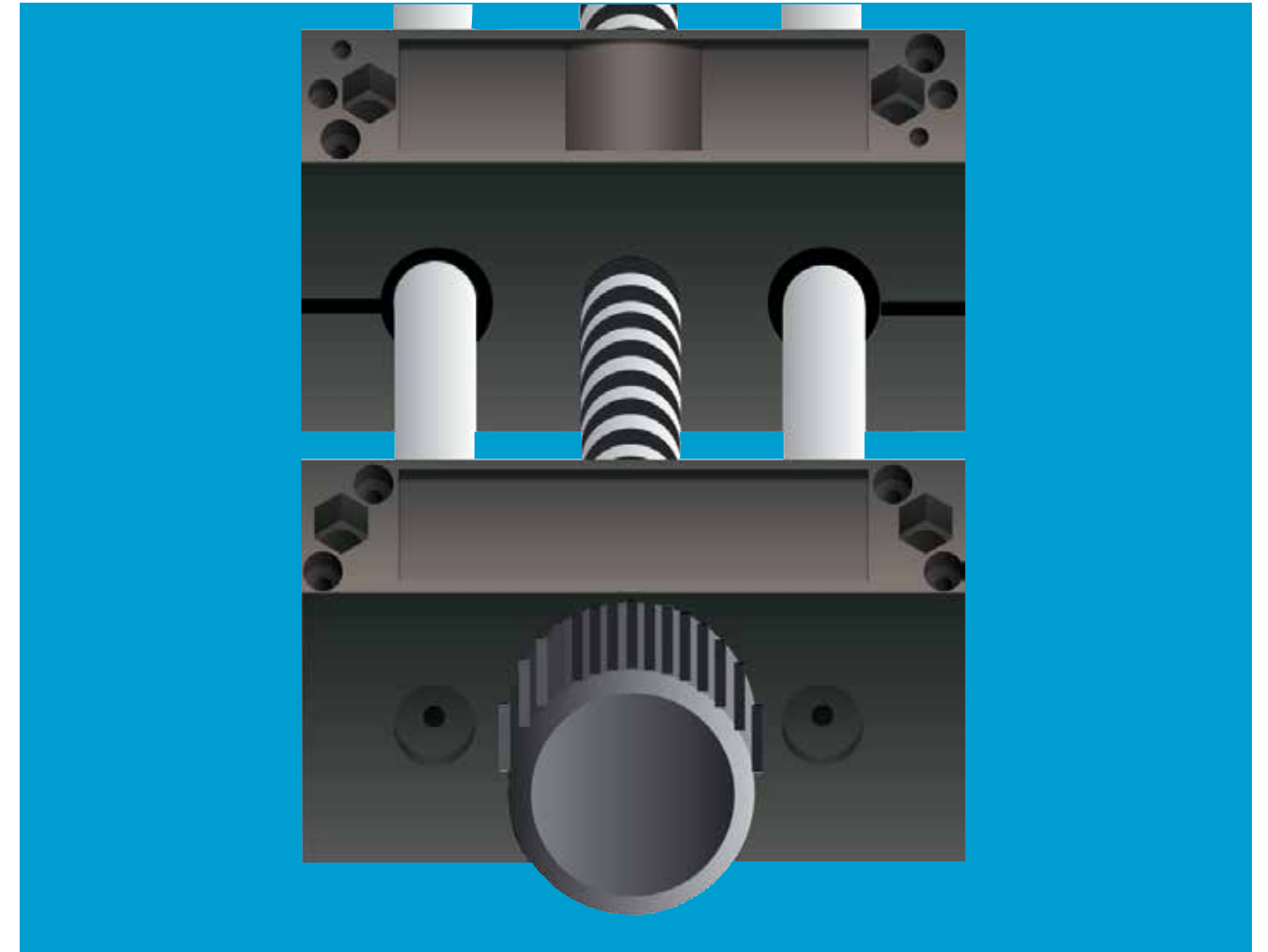
- Type  
**02:** With deep groove ball bearings
- Design  
**OD:** Right/left opposite drive
- Installation size
- Toothed belt axis

## Dimensions [mm]

Part No.	A	Al	H	Ht	E2	E3	L	R	f	lt	sg	ha	lz	Max. stroke length
	-0.3				±0.15	±0.15		±0.15		±0.3				[mm]
ZLW-0630-OD <sup>109)</sup>	54	60	31	28	45	51	144	30	3	42	M4	14	20	1,000
ZLW-1040-OD	74	100	45	44	60	87	204	40	1	52	M6	22	27	1,500
ZLW-1660-OD-02	104	100	70	70	86	82	248	58	0	79	M8	35	36	3,000
ZLW-1660-OD-03	104	100	70	70	86	82	248	58	0	79	M8	35	36	3,000
ZLW-1660-OD-04	104	100	70	70	86	82	248	58	0	74	M8	35	36	3,000

Part No.	l2	d2	d	T1	T2	Ws	W1	W2	dw1	IW	AW
		h9		±0.25	±0.25						
ZLW-0630-OD <sup>109)</sup>	20	8	4	20	21	2	20	2	5.5	260	60
ZLW-1040-OD	20	10	5	36	26.5	3	25	3	6.6	296	80
ZLW-1660-OD-02	20	14	M5-10 deep	65	60	5	15	54	8.5	328	114
ZLW-1660-OD-03	20	14	M5-10 deep	65	60	5	15	88	8.5	328	75
ZLW-1660-OD-04	20	14	M5-10 deep	65	60	5	–	–	–	248	70

<sup>109)</sup> Basic version: 6mm square, plastic adapter for pin diameter 10mm included



## drylin<sup>®</sup> econ entry-level series

Cost-effective linear modules

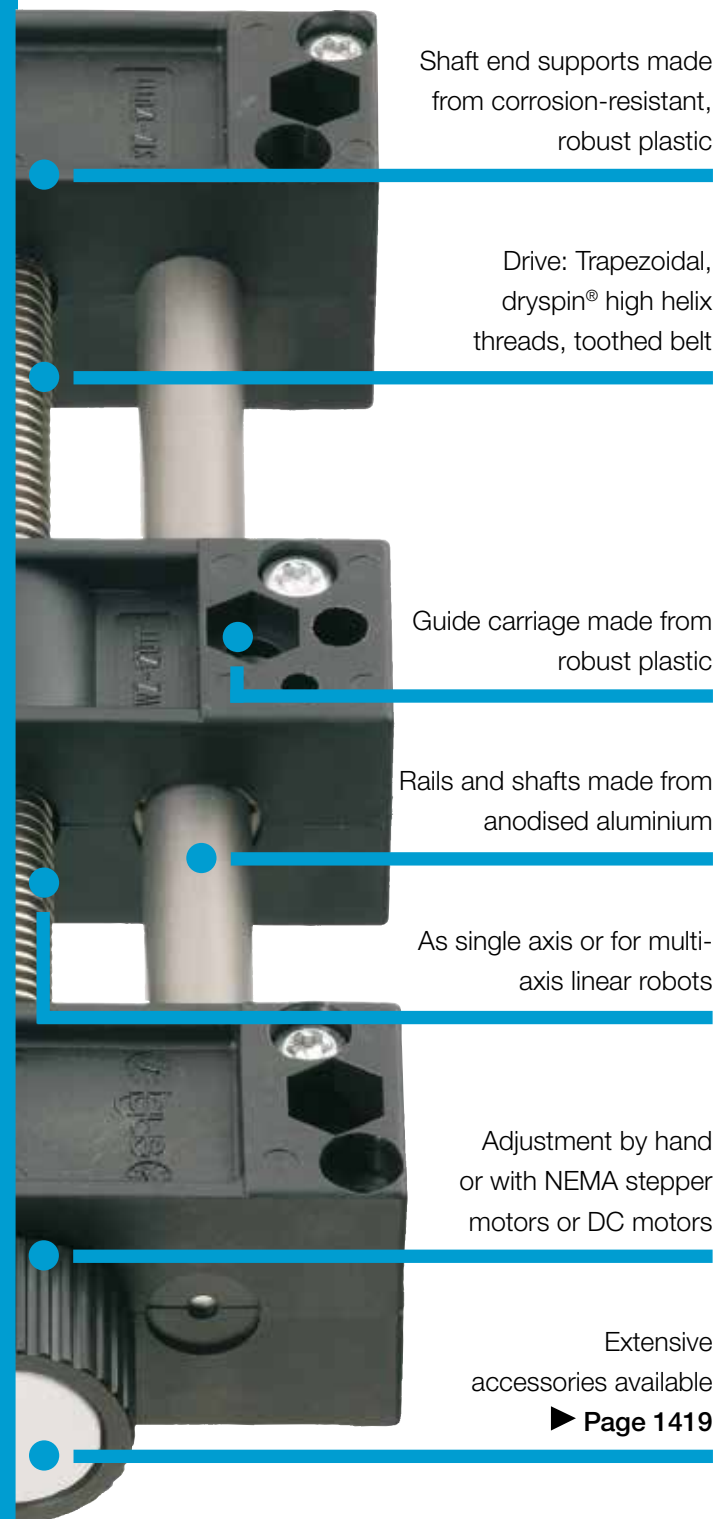
Drive: Trapezoidal and high helix lead screws,  
toothed belt

Lightweight construction

Corrosion-resistant

For positioning and adjusting tasks





Shaft end supports made from corrosion-resistant, robust plastic

Drive: Trapezoidal, dryspin® high helix threads, toothed belt

Guide carriage made from robust plastic

Rails and shafts made from anodised aluminium

As single axis or for multi-axis linear robots

Adjustment by hand or with NEMA stepper motors or DC motors

Extensive accessories available

► Page 1419

## Lubrication-free linear modules – drylin® econ

With econ, igus® defines the cost-effective maintenance-free entry-level models of the drylin® linear axes. There are suitable entry-level models in almost every product line and installation size, either with a lead screw or toothed belt. The econ series is characterised by cost-effective components produced via injection moulding, anodised aluminium profiles and fast assembly. drylin® econ models are configured and delivered so that they are ready to install and are thus the perfect alternative to complex in-house solutions for simple adjustment tasks.

- Lightweight construction due to combination of plastic and aluminium
- Designed for a fast assembly
- Cost-effective due to injection moulding and clear anodised surface

### Typical application areas

- Gripper technology
- Format adjustments
- Camera adjustment



### Available in 3-8 days

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.



### Carriage lengths: 26-45mm Stroke lengths: up to 500mm



### Product finder

► [www.igus.eu/shtp-productfinder](http://www.igus.eu/shtp-productfinder)



## drylin® econ SLWP linear module – robust in 2 sizes

- Flat and torsion-resistant due to drylin® W double shaft profiles
- Lead screw with self-locking trapezoidal or metric thread
- Fast adjustment due to dryspin® high helix thread

► Page 1364



## drylin® econ SHTP linear module – flexible in 3 sizes

- Lead screws made from aluminium, carbon, steel, stainless steel
- Carriage with integrated lead screw nuts and drylin® R liner
- With trapezoidal or high helix thread

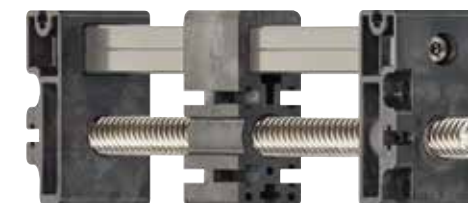
► Page 1366



## drylin® econ SLN miniature module SLN – small and fast

- Slim, narrow design
- Lead screw with plain bearing support with metric thread or dryspin® high helix thread
- Feed rate of up to 25mm per rotation

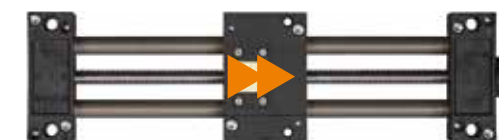
► Page 1370



## drylin® econ SLTP linear system – savings thanks to injection moulding

- Developed with 3D printing, produced cost-effectively thanks to injection moulding
- Very fast assembly due to few components
- Carriage with a lot of fastening options

► Page 1365



## drylin® econ SHTP-FF linear module – Fast-Forward

- With quick-release mechanism
- For fast adjustment
- Self-locking
- Variable stroke lengths

► Page 1369



## drylin® econ ZLW toothed belt axis – light and fast

- Lightweight due to use of plastic and aluminium
- Variable attachment by means of slot nuts and clamping elements
- Individual stroke lengths (sizes 0630 to 500mm, 1040 to 1,000mm)

► Page 1371

## drylin® econ DLE-FG flat linear robot – for predefined surfaces

- Linear robot based on econ toothed belt axes
- For a workspace of 500 x 500mm
- Ready to connect with NEMA stepper motors

► Page 1372



## The SLW entry-level model

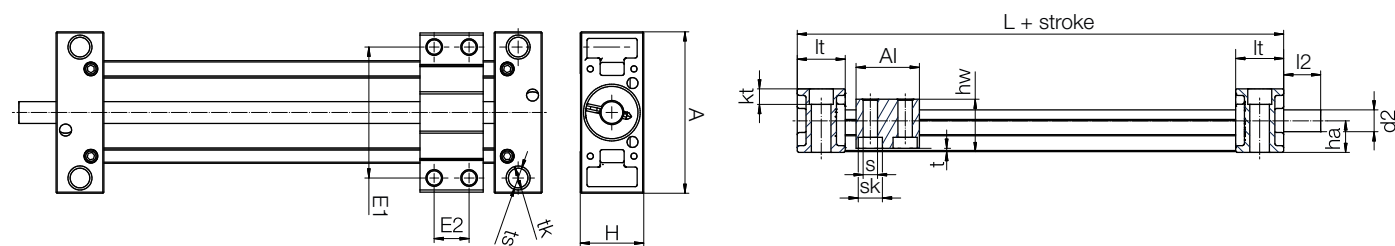


- Based on drylin® W profile guides
  - Clear anodised guide rails
  - Torsion-resistant double shaft systems
  - Self-locking due to metric or trapezoidal thread
  - Fast operation without self-locking due to dryspin® high helix thread
  - Available accessories
- Page 1419



**Order key**  
complete solution ► Page 1320

**SLWP-0630-E**



## Technical data

Part No.	Max. stroke length	Weight [kg]	additional (per 100mm) [kg]	Max. stat. load capacity	
	[mm]			axial [N]	radial [N]
SLWP-0630-E	300	0.15	0.08	50	50
SLWP-1040-E	500	0.30	0.10	50	50

## Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	I	hw	f	lt	tk	ts
	-0.3	-0.3		±0.2	±0.2	±0.15				±0.1		
SLWP-0630-E	54	60	20	40	45	51	100	18.0	1.5	20	11	6.6
SLWP-1040-E	74	29	29	60	16	—	73	23.5	1.5	22	11	6.8

Part No.	kt	s	sk	d	T	l2	d2	ha
	±0.1						Standard	
SLWP-0630-E	8.0	5.0	6Kt M4	5.0	Tr8x1.5	15	Tr8x1.5 <sup>160)</sup>	9.5
SLWP-1040-E	9.0	6.3	6Kt M6	7.5	Tr10x2	17	Tr10x2 <sup>161)</sup>	14.5

<sup>160)</sup> Alternative: M8, Tr8x1.5, Ds8x10, Ds8x15

<sup>161)</sup> Alternative: Tr10x2, Tr10x3, Ds10x12, Ds10x25, Ds10x50

## The SLT entry-level model

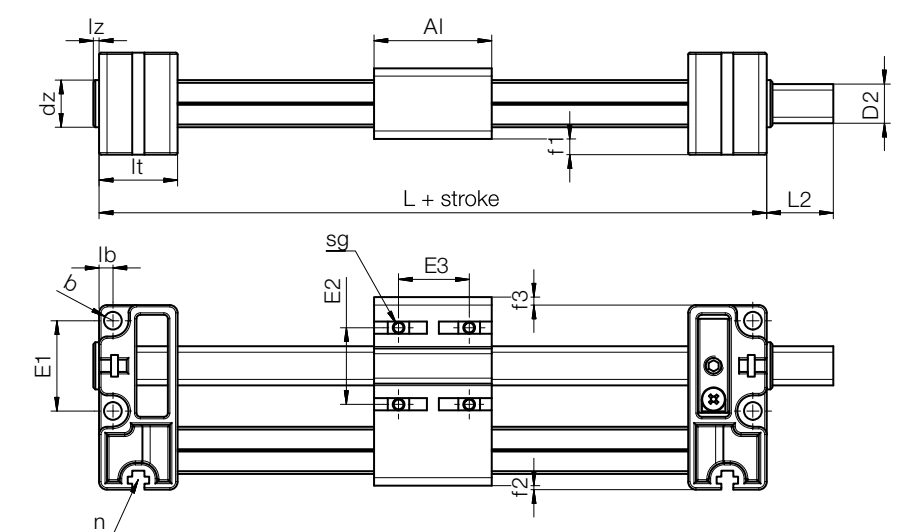
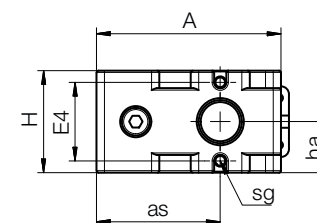


- Extremely cost-effective
- Torque-resistant due to AWMQ aluminium square profile
- Variable design
- Left or right-hand lead screw option
- Carriage with many connection options



**Order key**

**SLTP-1012-E**



## Technical data

Part No.	Max. stroke length	Weight [kg]	additional (per 100mm) [kg]	Max. stat. load capacity		Max. rpm [rpm]	Max. speed [m/min]
	[mm]			axial [N]	radial [N]		
SLTP-1012-E	300	0.147	0.081	50	100	250	0.5

## Dimensions [mm]

Part No.	A	H	L + stroke	Al	L2	D2	E1	E2	E3	E4	T <sup>152)</sup>
SLTP-1012-E	47	26	70	30	17	10	23	19.5	8.5-24.5	20	Tr10x2

Part No.	lt	dz	lz	b	lb	sg <sup>153)</sup> (DIN562)	ha	as	n	f1	f2	f3
		-0.05										
SLTP-1012-E	20	12	1.5	4.5	3.5	M3	13	31.5	M3	4	1	2

<sup>152)</sup> Alternative: Tr10x3, Tr10x4P2, Ds10x12, Ds10x25, Ds10x50

<sup>153)</sup> 6 pieces of M3-DIN562 screws included in delivery

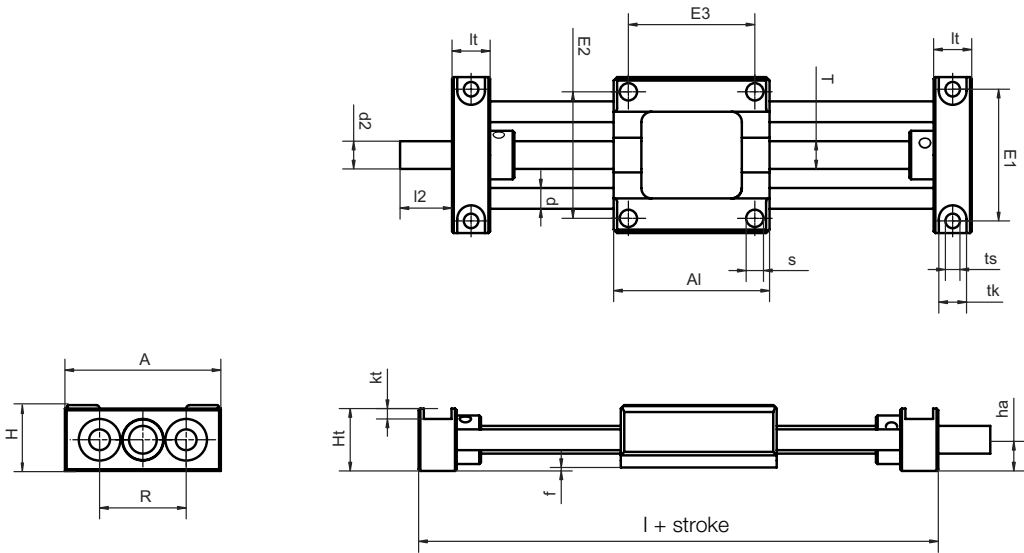


- Miniature version
  - Lightweight
  - Cost-effective
  - Corrosion-resistant
  - Carriages and shaft end supports made from high-performance polymers
  - Available accessories
- Page 1419



Order key

SHTP-01-06-AWM



Technical data

Part No.	Max. stroke length [mm]	Aluminium shaft		Max. static load capacity		More Information
		Weight [kg]	additional [kg] (per 100mm)	axial [N]	radial [N]	
SHTP-01-06-AWM	300	0.11	0.06	50	50	Carriage, square, with 4 symmetrical mounting holes

Dimensions [mm]

Part No.	A	Al	H	Ht	E1	E2	E3	I	R	f	kt	lt	tk	ts
SHTP-01-06-AWM	45	45	19	18	38	36.5	36.5	67	25	1	3	11	8	4.2

Part No.	s	d	T	I2	d2 <sup>99)</sup>	ha
SHTP-01-06-AWM	5.1	6	M8	15	M8	9

<sup>99)</sup> Lead screw end unmachined (standard)

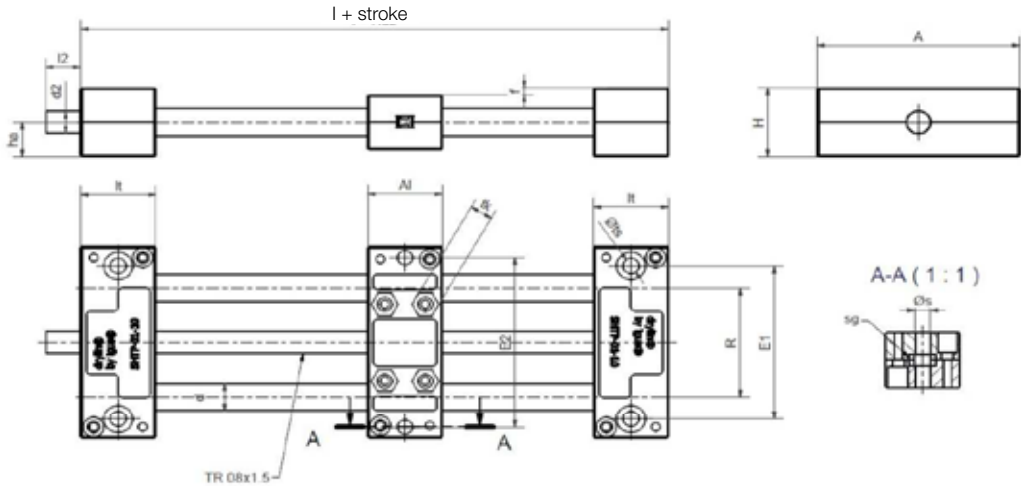


- Lightweight
  - Low-profile design
  - Ideal for multi-carriage solutions
  - Available accessories
- Page 1419



Order key

SHTP-01-10



Technical data

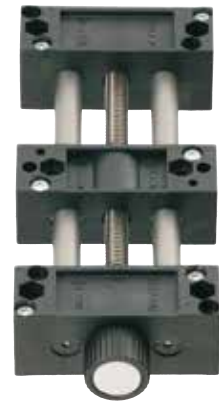
Part No.	Max. stroke length [mm]	Aluminium shaft		More Information
		Weight [kg]	additional [kg] (per 100mm)	
SHTP-01-10	350	0.2	0.08	Liners and nuts made from iglidur® J

Dimensions [mm]

Part No.	A	Al	H	E1	E2	I	R	f	lt	tk	ts
SHTP-01-10	70	26	25	56	62	78	40	2.5	±0.1	8	+0.15

Part No.	s	sg	d	T	I2	d2 <sup>99)</sup>	ha	Max. static load capacity	
								axial [N]	radial [N]
SHTP-01-10	5.2	M5	10	Tr08x1.5	15	Tr08x1.5	12.5	100	400

<sup>99)</sup> Lead screw end unmachined (standard)

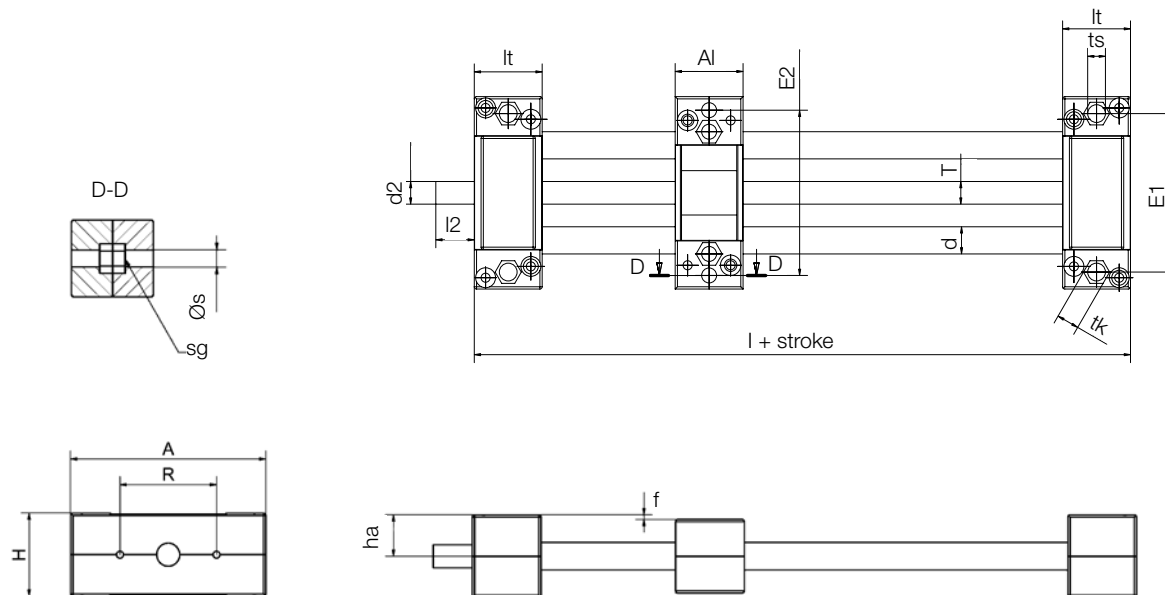


- Solid polymer design
- Lightweight
- Cost-effective
- Corrosion-resistant
- Available accessories
- Page 1419
- Available with motor
- Page 1373



Order key

SHTP-01-12-AWM



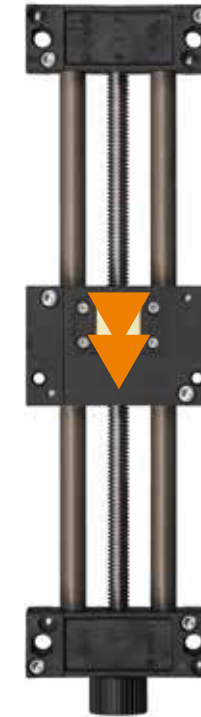
## Technical data

Part No.	Max. stroke length [mm]	Aluminium shaft		More Information
		Weight [kg]	additional [kg] (per 100mm)	
SHTP-01-12	500	0.35	0.11	Liners and nuts made from iglidur® J
SHTP-02-12	500	0.35	0.11	Bearing and nut integrated into the carriage

## Dimensions [mm]

Part No.	A	Al	H	E1	E2	I	R	f	It ±0.1	tk	ts +0.15
SHTP-01-12	85	30	36	70	73	90	42	2	30	10	6.0
SHTP-02-12	85	30	36	70	73	90	42	2	30	10	6.0

Part No.	s	sg	d	T	I2	d2 <sup>99)</sup>	ha	Max. static load capacity	
								axial [N]	radial [N]
SHTP-01-12	6.3	M6	12	Tr10x2	17	Tr10x2	18	200	400
SHTP-02-12	6.3	M6	12	Tr10x2	17	Tr10x2	18	200	400

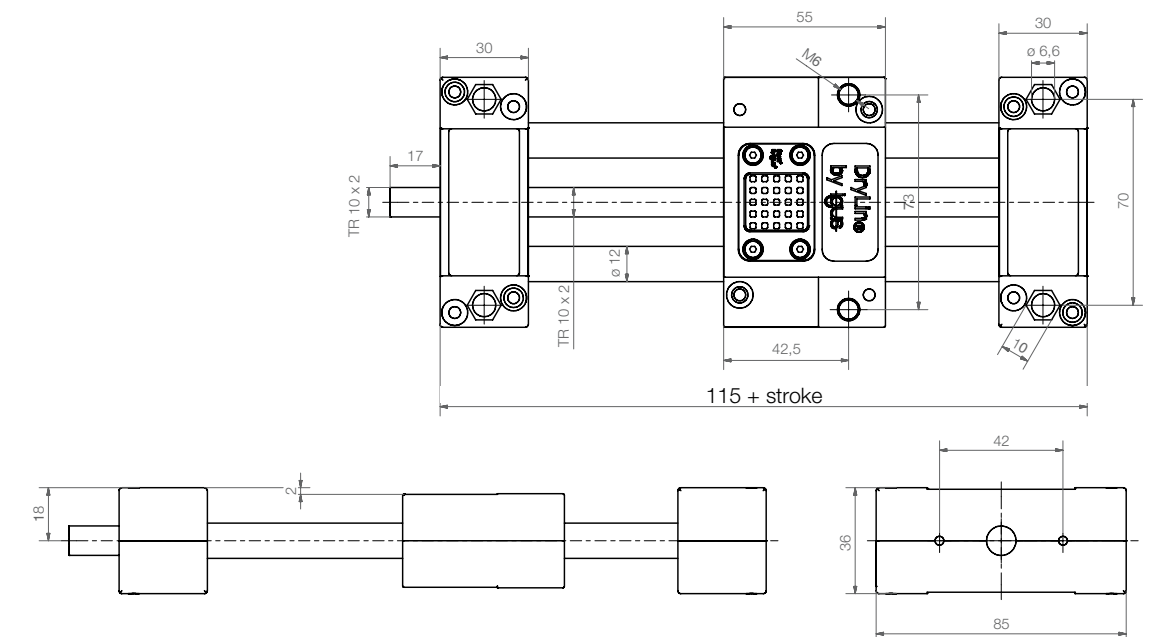
<sup>99)</sup> Lead screw end unmachined (standard)

- Light solid polymer model
- For fast format adjustments
- Self-locking
- Variable stroke length
- Only recommended for horizontal applications
- Max. stat. axial load 200N
- Max. dynamic. axial load 50N
- Available accessories
- Page 1419



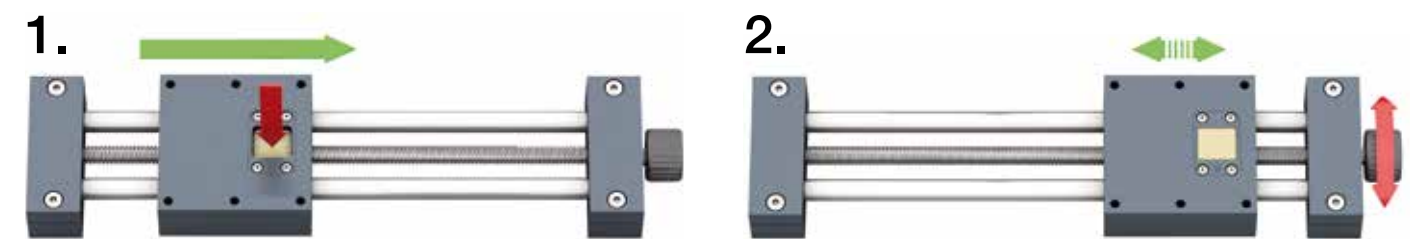
Order key

SHTP-01-12-AWM-FF



## Technical data

Part No.	Max. stroke length [mm]	Weight [kg]	Additional weight (per 100mm)
SHTP-01-12-AWM-FF <sup>100)</sup>	500	0.35	0.11

<sup>100)</sup> Liners and lead screw nuts made from iglidur® J

press &gt; disengage &gt; move manually &gt; click into place &gt; fine-tuning



Miniature linear module, basic version

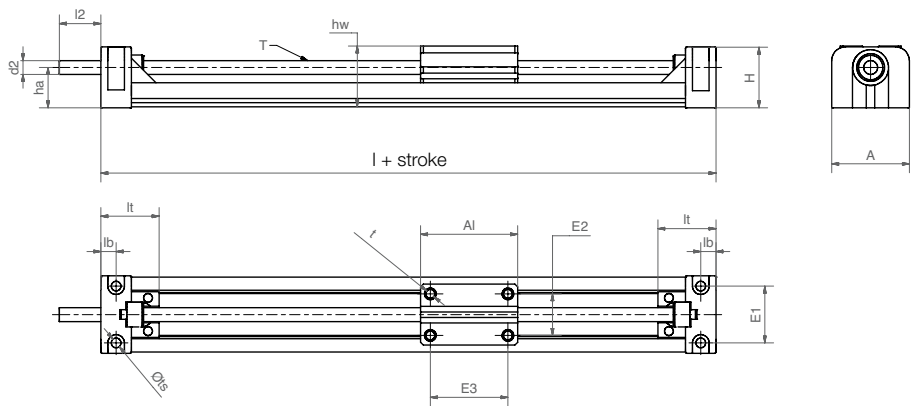
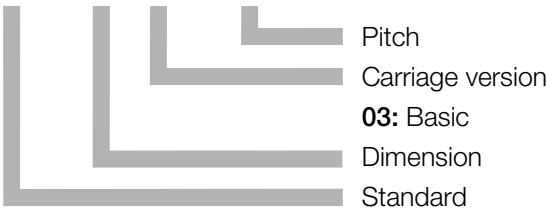


- Single parts made from aluminium and plastic
- Entry-level model
- Lead screw with plain bearing support
- Retrofitting possible
- Available accessories  
► Page 1419
- Available with motor  
► Page 1373



Order key

SLN-27-03-0008



Technical data

Part No.	Max. stroke length	Weight	additional	Max. static load capacity		Max. speed	Max. drive torque
	[mm]			axial	radial		
		[kg]	[kg]	[N]	[N]	[rpm]	[Nm]
SLN-27-03-0008	250	0.06	0.04	10	40	100	0.10
SLN-27-03-0025	250	0.06	0.04	10	40	100	0.15
SLN-27-03-0051	250	0.06	0.04	10	40	100	0.20
SLN-27-03-0127	250	0.06	0.04	10	40	100	0.30
SLN-27-03-0254	250	0.06	0.04	10	40	100	0.40

Dimensions [mm]

Part No.	A	AI	H	E1	E2	E3	E11 <sup>102)</sup>	I	hw	lt	lb	ts	t	T	d2 <sup>98)</sup>	I2	ha
	±0.2	-0.1	±0.2	±0.15	±0.15	±0.15			±0.2	±0.2							
SLN-27-03-0008	28	35	22	20.5	15	28	15	77	22	21	5.5	3.5	3.2	M5	4	15	14.5
SLN-27-03-0025	28	35	22	20.5	15	28	15	77	22	21	5.5	3.5	3.2	6.35x2.54	5	15	14.5
SLN-27-03-0051	28	35	22	20.5	15	28	15	77	22	21	5.5	3.5	3.2	6.35x5.08	5	15	14.5
SLN-27-03-0127	28	35	22	20.5	15	28	15	77	22	21	5.5	3.5	3.2	6.35x12.7	5	15	14.5
SLN-27-03-0254	28	35	22	20.5	15	28	15	77	22	21	5.5	3.5	3.2	6.35x25.4	5	15	14.5

<sup>102)</sup> The dimension E11 can only be found in conjunction with the igus® motor connection

<sup>98)</sup> Thread/remaining thread visible

With manual clamp (optional): Part No. SLN-27-HK-...

Linear axes with toothed belt

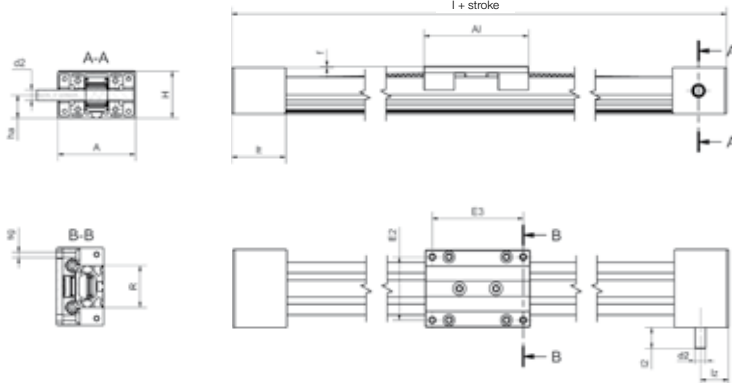
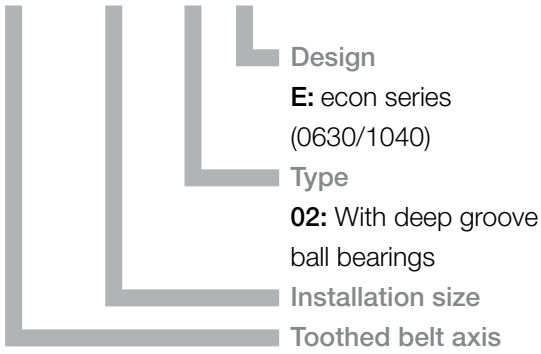


- Fast positioning of small loads
- Quiet operation and flat design
- Drive pin on one or both sides
- Plastic linear carriage
- Lightweight due to combination of plastic and aluminium
- Technical data  
► Page 1346



Order key

ZLW-0630-02-E



Dimensions [mm]

Part No.	A	AI	H	E2	E3	I	R	f	lt	sg	ha	hc	lz	I2	d2
	-0.3			±0.15	±0.15		±0.15		±0.3						h9
ZLW-0630-02	54	60	31	45	51	144	30	3	42	M4	14	22.5	20.5	20	8
ZLW-1040-02	74	100	44	60	87	204	40	1	52	M6	22	22.5	27	20	10

Connecting dimensions [mm]

Part No.	X	E	AP	Lp	dp	n	nb	nw	nh	T1	T2	d
		±0.2	-1.0							±0.25	±0.25	
ZLW-0630-02 <sup>109)</sup>	variable	40	52	15	5.5	-	-	4.3	7	20	21	3.2
ZLW-1040-02	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0

<sup>109)</sup> Basic version: 6mm square, plastic adapter for pin diameter 10mm included

Flat linear robot - for predefined surfaces

**DLE-FG-0003**

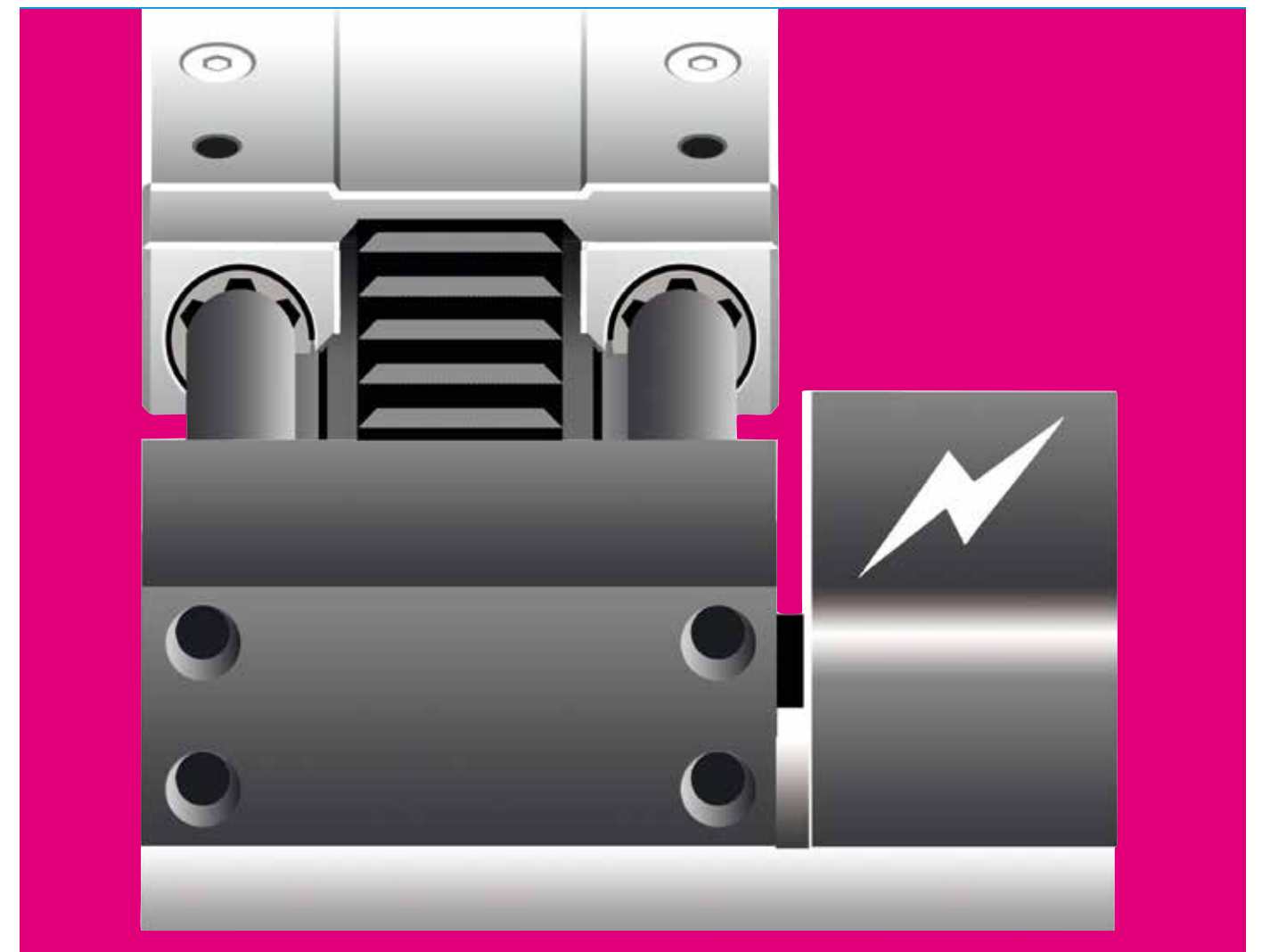
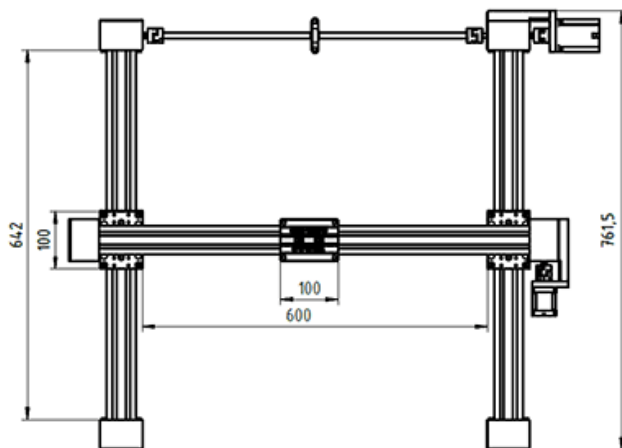
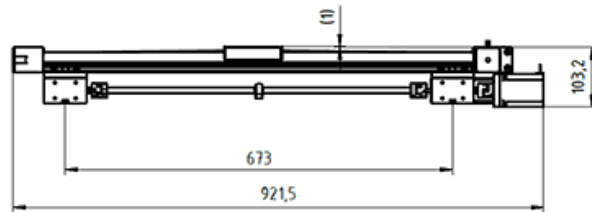
- **x-axis:** drylin® ZLW-1040 econ toothed belt axis with NEMA23 stepper motor with stranded wire
- **y-axis:** drylin® ZLW-1040 econ toothed belt axis with NEMA17 stepper motor
- Proximity switches available

**Technical data**

<b>Workspace:</b>	500 x 500mm
<b>Max. speed:</b>	0.5m/s
<b>Max. acceleration:</b>	1m/s <sup>2</sup>
<b>Repeatability:</b>	1mm
<b>Load capacity:</b>	10N



**Part No.**  
DLE-FG-0003 econ version



## drylin® E electric drive technology

Lubrication-free linear modules with stepper and DC motors

Drive: Lead screw, toothed belt or rack

Linear axes and multi-axis system

Delta robots

Motors and motor control systems



## drylin® E – linear axes with motor in 24hrs



Linear axes  
with motor  
DLE-SA  
► Page 1384

## drylin® E – linear axes with motor



Linear axes  
with motor  
► Page 1387



Linear modules with lead  
screw drive  
► Page 1388



Linear axes with toothed  
belt  
► Page 1390



Linear axes with rack  
► Page 1392

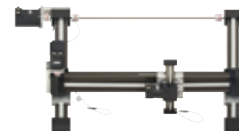
## drylin® E – multi-axis linear robots



Line robot:  
for vertical working planes  
DLE-LG  
► Page 1396



Flat linear robot:  
for predefined surfaces  
DLE-FG  
► Page 1397



Room linear robot:  
for three dimensional  
applications – DLE-RG  
► Page 1398



Customised linear robot  
solutions  
► Page 1399

## drylin® – delta robots - lift/swivel unit



Delta robots  
► Page 1400



Lift/swivel unit,  
linear and rotating  
drylin® HSQ  
► Page 1402



Torque-resistant linear module,  
controlled separately  
drylin® SLQ  
► Page 1403

## drylin® – lead screw motors



Stand-alone solution for  
customer requirements  
► Page 1407



Lead screw with precision  
machined ends  
► Page 1408

## drylin® – cantilever axes



Dynamic z-axis for linear  
robot structures:  
GRW  
► Page 1410



Extremely light axis for  
pick & place:  
GRQ  
► Page 1411



Lightweight z-axis with  
direct rack drive:  
GRR  
► Page 1412



Toothed belt axis:  
ZAW  
► Page 1413

## drylin® – cantilever axes



Linear actuator  
  
drylin® QLA  
► Page 1414

## drylin® – motor control



Motor control:  
  
D1 dryve  
► Page 1416



Motor control:  
  
D3 dryve  
► Page 1417



drylin® general drive technology – accessories



Angular drives,  
flexible positioning

► Page 1422



Angular drive  
for heavy duty

► Page 1423



Hygienic design angular  
drive

► Page 1423



Position indicator

► Page 1424



Lead screw clamps

► Page 1425



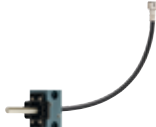
Hand wheel

► Page 1426



Flexshafts

► Page 1427



Flexshaft incl. remote  
control unit  
SHT-ROU

► Page 1428

drylin® electric drive technology – accessories



Stepper motors

► Page 1432



DC motors with spur gear

► Page 1436



Protective cover  
for DC motors

► Page 1437



Couplings

► Page 1440



Motor flanges

► Page 1441



Cables  
for stepper motors

► Page 1442



Proximity switches: Limit  
and reference switches

► Page 1443



Spacer for height  
adjustment:  
SLW/SHT linear modules

► Page 1444

drylin® electric drive technology – accessories



Mounting bracket

► Page 1445



Adapter kit  
for linear robot setup

► Page 1446



T-slot plate

► Page 1447



Slot nuts for mounting

► Page 1448



Clamps

► Page 1449



Adapter plate

► Page 1450



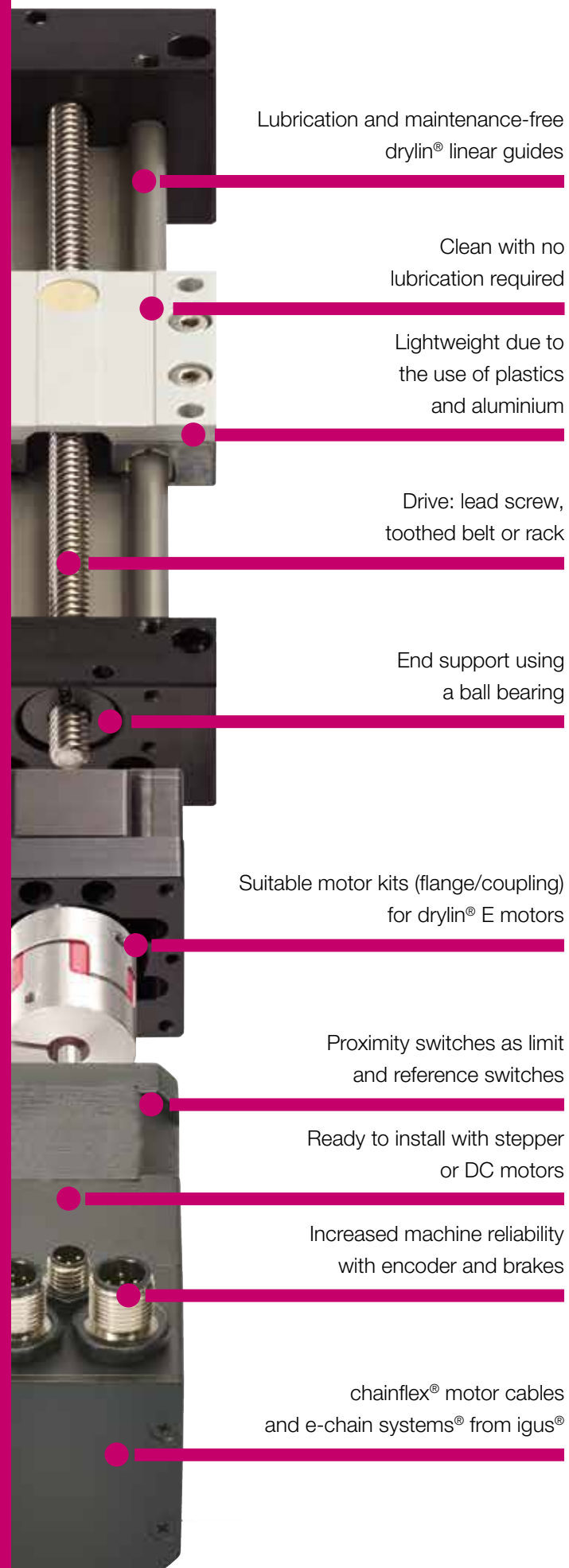
Stainless steel  
angle kit

► Page 1451



Accessories for  
linear robot drives

► Page 1452



Lubrication and maintenance-free  
drylin® linear guides

Clean with no  
lubrication required

Lightweight due to  
the use of plastics  
and aluminium

Drive: lead screw,  
toothed belt or rack

End support using  
a ball bearing

Suitable motor kits (flange/coupling)  
for drylin® E motors

Proximity switches as limit  
and reference switches

Ready to install with stepper  
or DC motors

Increased machine reliability  
with encoder and brakes

chainflex® motor cables  
and e-chain systems® from igus®

## Automation with drylin®

The requirements for motorised adjustments are becoming ever more demanding, installation spaces are reducing in size and customised solutions are sought for many systems. drylin® offers the right linear axis for almost any installation size based on a thread, toothed belt or rack and pinion drive. Thanks to drylin® E automation technology, drylin® linear axes can be operated with hybrid stepper motors or DC motors. Integrated encoders and freely positionable proximity switches offer outstanding machine reliability. The design can be flexibly adapted to the level of available space. The combination of linear axes makes it possible to offer entire structures as linear/flat or room linear robots. For rapid solutions, igus® offers pre-configured and assembled systems from stock. All drylin® E linear axes are predictable online and configured and ordered entirely ready for installation and connection.

- Lubrication-free linear axes
- Clean and dirt-resistant operation
- Extensive accessories

### Typical application areas

- Packaging technology
- Laboratory technology
- General mechanical engineering
- Medical



#### Available from stock

Detailed information about delivery time online.



#### Price breaks online

No minimum order value. No minimum order quantity.



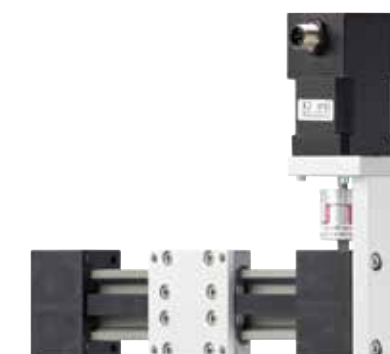
#### Product finder

► [www.igus.eu/drylinE-finder](http://www.igus.eu/drylinE-finder)



### Linear axes with motor from 24hrs

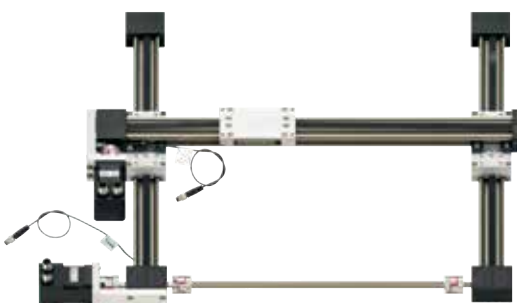
- Pre-configured drylin® E linear axes from stock
  - Drive: lead screw or toothed belt
  - NEMA stepper motor included
- From page 1383



### Custom linear axes with motor

- Online configurable drylin® E linear axes
  - Drive: lead screw, toothed belt or rack
  - With stepper and DC motors
- From page 1390

## Low Cost Automation



### Multi-axis linear robots

- Pre-configured assembly kits available from stock
  - 3 different linear robot structures: line/flat/room
  - For workspaces of up to 500 x 500 x 100mm
- From page 1394



### Delta robots

- For a workspace of up to Ø360mm
  - Kit or pre-installed kinematics
  - dryve motor control system available
- From page 1400



### Lead screw motors

- Precise and efficient
  - Compact structure, variable lead screw pitches
  - Stepper motors with/without encoder
- From page 1405



### Cantilever axis

- As z-axis for linear robot structures
  - For pick & place applications
  - With toothed belt or rack
- From page 1409

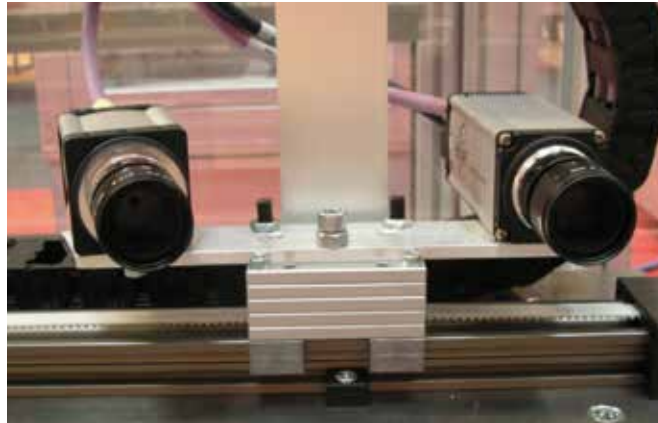


### Electrical components and accessories

- Motor control systems
  - Stepper and DC motors
  - Accessories for manual/electrical drive
- From page 1415

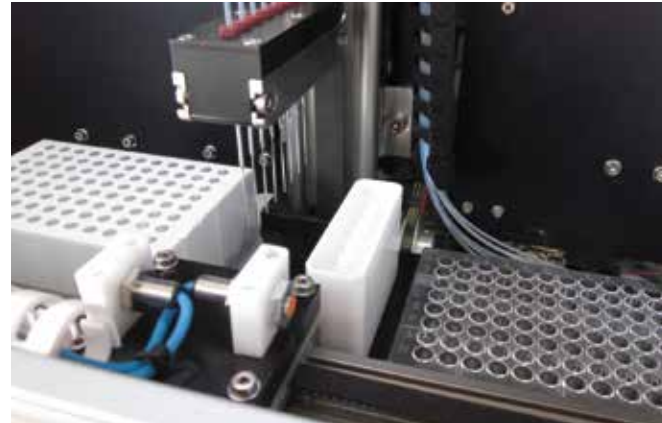


## drylin® E | Linear axes with motor | Application examples



### Camera adjustment

Quiet, vibration and lubrication-free operation is given on this camera adjustment on a conveyor belt using a drylin® ZLW toothed belt axis.



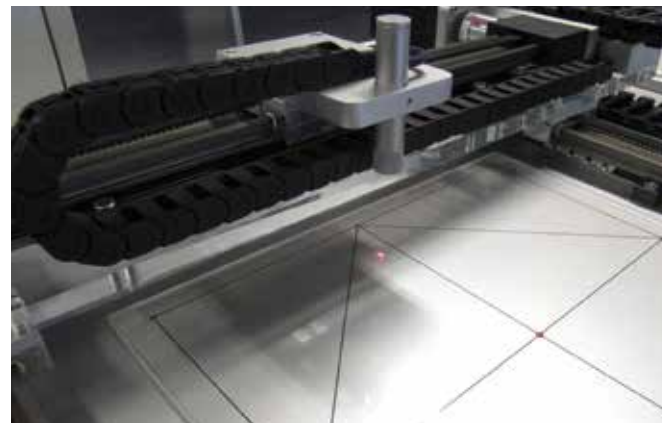
### Sampling tool/pipettor

Space-saving telescopic adjustment through compact and lubrication-free drylin® ZLW toothed belt axes. (Sierra Sensors GmbH)



### Adjustment of inspection equipment

drylin® ZLW toothed belt axis in an inspection camera adjustment for checking the position of sealing rings. (OLPE Jena GmbH)



### Sensor adjustment/measuring technology

drylin® ZLW-0630 toothed belt axes as a two-dimensional linear robot (X,Y-axis) to adjust a laser measuring head. Compact, lightweight and maintenance-free due to polymer plain bearings.



### Pick and place

Quick and maintenance-free handling with drylin® toothed belt axes as a room linear robot (X, Y, Z-axis).



### Handling of small parts

The robust and lubrication-free design of the ZLW and drylin® W profiles enables a long and maintenance-free process cycle.

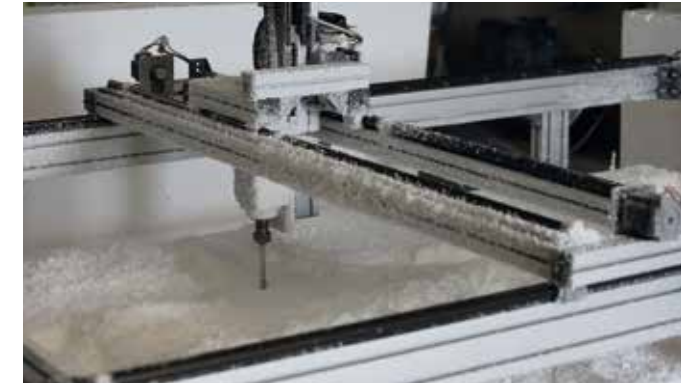
 [www.igus.eu/drylinE-applications](http://www.igus.eu/drylinE-applications)

## drylin® E | Multi-axis linear robots | Application examples

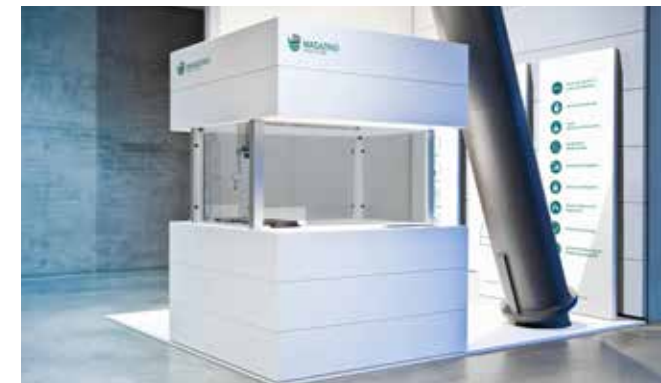
Lubrication and maintenance-free on all levels



This CNC machine mills styrofoam in particular. This produces a large amount of small particles, which settle in all parts of the machine due to their electrostatic charge. Conventional linear guides and bearings clog with time and cause a high degree of maintenance. Since



the manufacturer uses a lubrication-free drylin® linear guide system from igus® on all three axes, maintenance work has become a thing of the past. (MatinMat, Rubén Tortosa Cuesta, Rafaelguaraf, Spain)



### Automatic order picking machines

Magazino, a start-up company in Munich, is developing new ideas for automated order picking. A new kind of pick & place station for small parts can detect, grasp and place packaged items extremely quickly thanks to 3D camera technology and "fast" software. drylin® toothed



belt axes are used in the system's three linear axes. With regard to the plain bearings as well, the Magazino developers are also choosing products from the igus® modular construction kit. (Magazino GmbH)



### 3D printing in XXL format

With the second generation "KamerMaker 2.0" Actual can print larger elements with high precision and higher speed. The igus® linear robot system plays a decisive role in this. In this case, a room linear robot is used in which



the x and y-axes feature drylin® toothed belt units and the z-axis drylin® lead screw/lead screw nut systems. Ready-to-install drylin® linear robots for one, two and three axes with drives and sensors for position detection. (Actual)



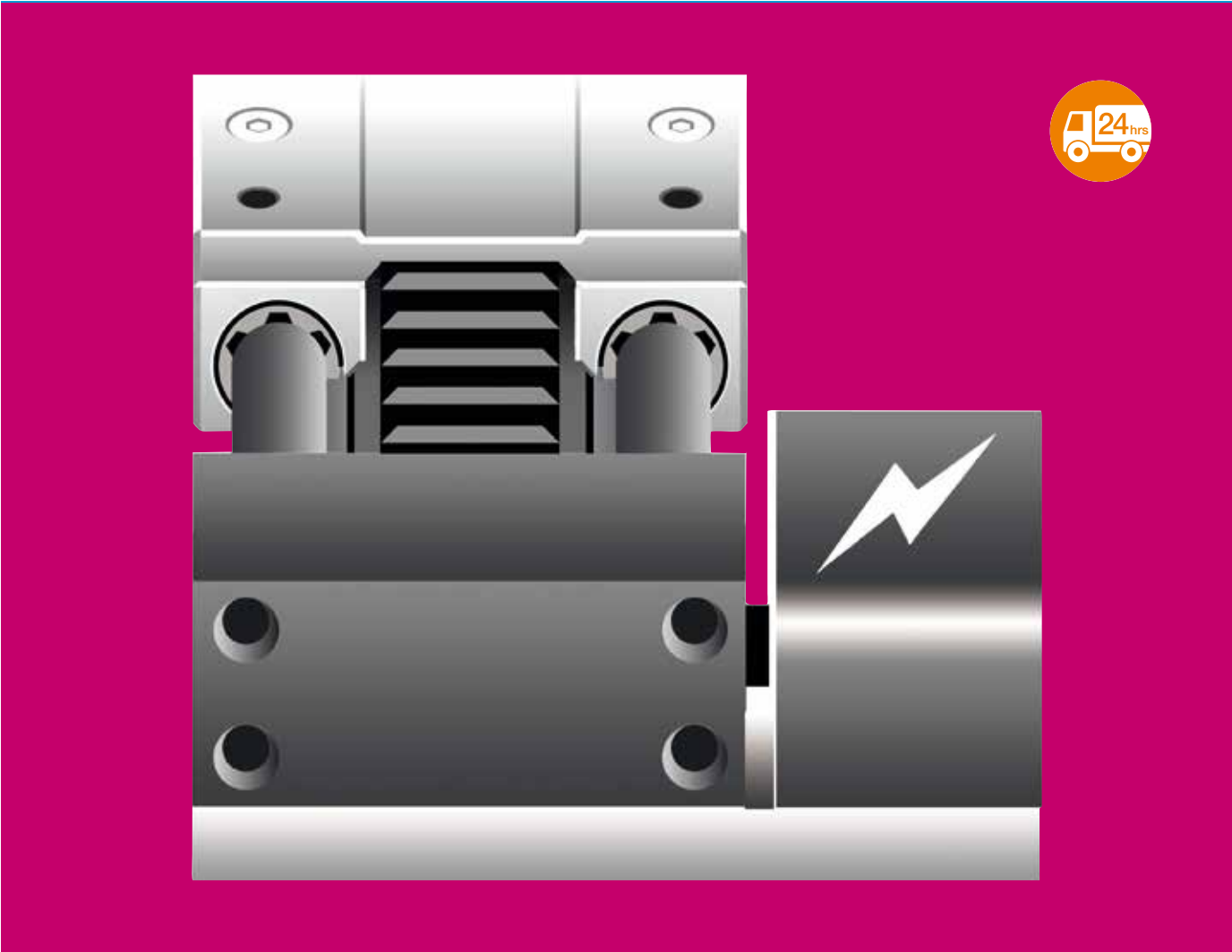


**Complete drive technology configurable with or without motor**

After you have selected your application parameters, the product finder shows an overview of the linear systems and the motors that are suitable. The product finder calculates the individual price of the linear axis as well as the utilisation rate of the motors and the service life in strokes. With just a few clicks, you can put together a complete linear axis incl. motor, connection cables and built-on parts.



► [www.igus.eu/linearmodule-configurator](http://www.igus.eu/linearmodule-configurator)



# drylin® electric drive technology – ready-to-install linear axis in 24hrs

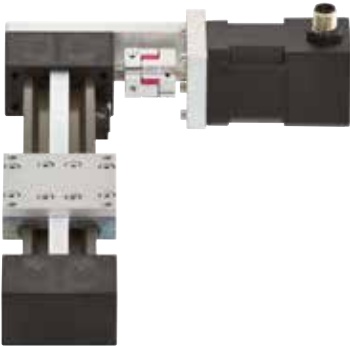
Linear modules with motor from stock

Drive: lead screw or toothed belt

Pre-configured stroke lengths

With NEMA stepper motors

Mounting accessories

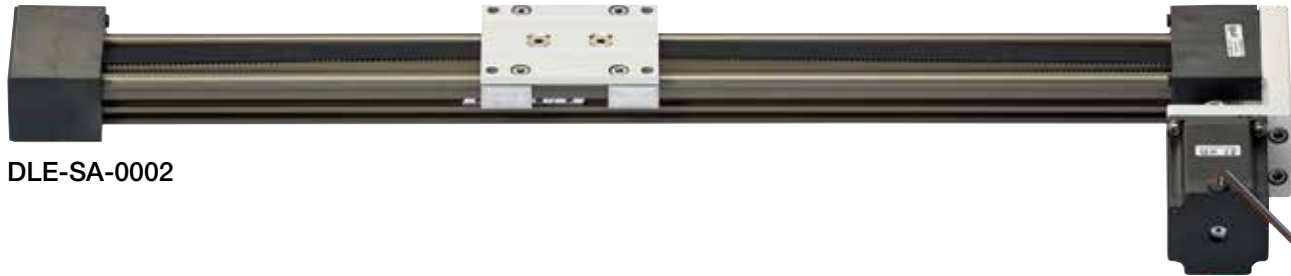


# drylin® E | Linear axes with motor | DLE

Linear axes with motor from stock - available in 24hrs



DLE-SA-0001



DLE-SA-0002



DLE-SA-0003



DLE-SA-0004



DLE-SA-0005



DLE-SA-0006

# drylin® E | Linear axes with motor | DLE

Available in 24 hours:

### drylin® E linear axes with motor

igus® delivers ready-to-install, preconfigured linear modules (drive: lead screw or toothed belt) from stock within 24 hours.

You simply choose between 3 sizes, 3 stroke lengths and 3 stepper motors ... and the system is delivered in 24 hours after you place your order.

- Drive: lead screw or toothed belt
- Completely lubrication-free
- Stepper motors with stranded wires
- Pre-assembled and tested
- Basis drylin® ZLW and SAW linear axes

### Technical data

Part No.	Installation size	Carriage length	Stroke length	Motor type	Max. static load capacity	
					axial [N]	radial [N]
DLE-SA-0001	ZLW-0630 basic	60	300	NEMA17 stranded wires	35	140
DLE-SA-0002	ZLW-1040 basic	100	500	NEMA23 stranded wires	100	400
DLE-SA-0003	ZLW-1080 standard	100	1,000	NEMA23XL stranded wires	150	600
DLE-SA-0004	SAW-0630 Tr08x1.5	60	250	NEMA17 stranded wires	100	400
DLE-SA-0005	SAW-1040 Tr10x2	69	500	NEMA23 stranded wires	500	2,000
DLE-SA-0006	SAW-1080 Tr12x3	100	500	NEMA23XL stranded wires	750	2,000



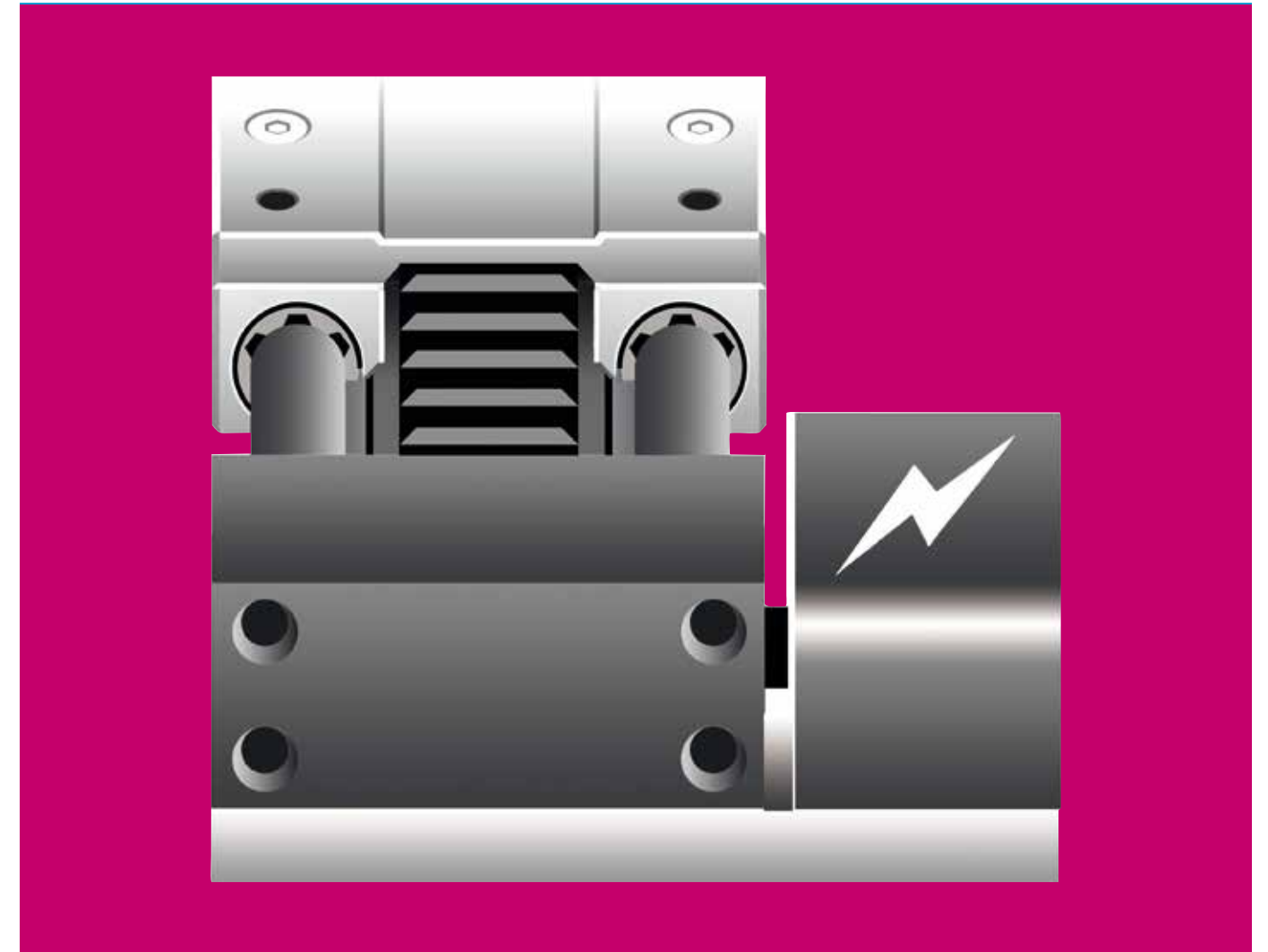
Dimensionally interchangeable with  
drylin® linear axes  
drylin® SAW ► Page 1321  
drylin® ZLW ► Page 1343



Technical data  
drylin® SAW ► Page 1321  
drylin® ZLW ► Page 1343



Further information about the motors  
► Page 1432



## drylin<sup>®</sup> electric drive technology – Linear axes with motor

Linear axes in many variants

With NEMA stepper motors or DC motors

Individual stroke lengths

Configure online

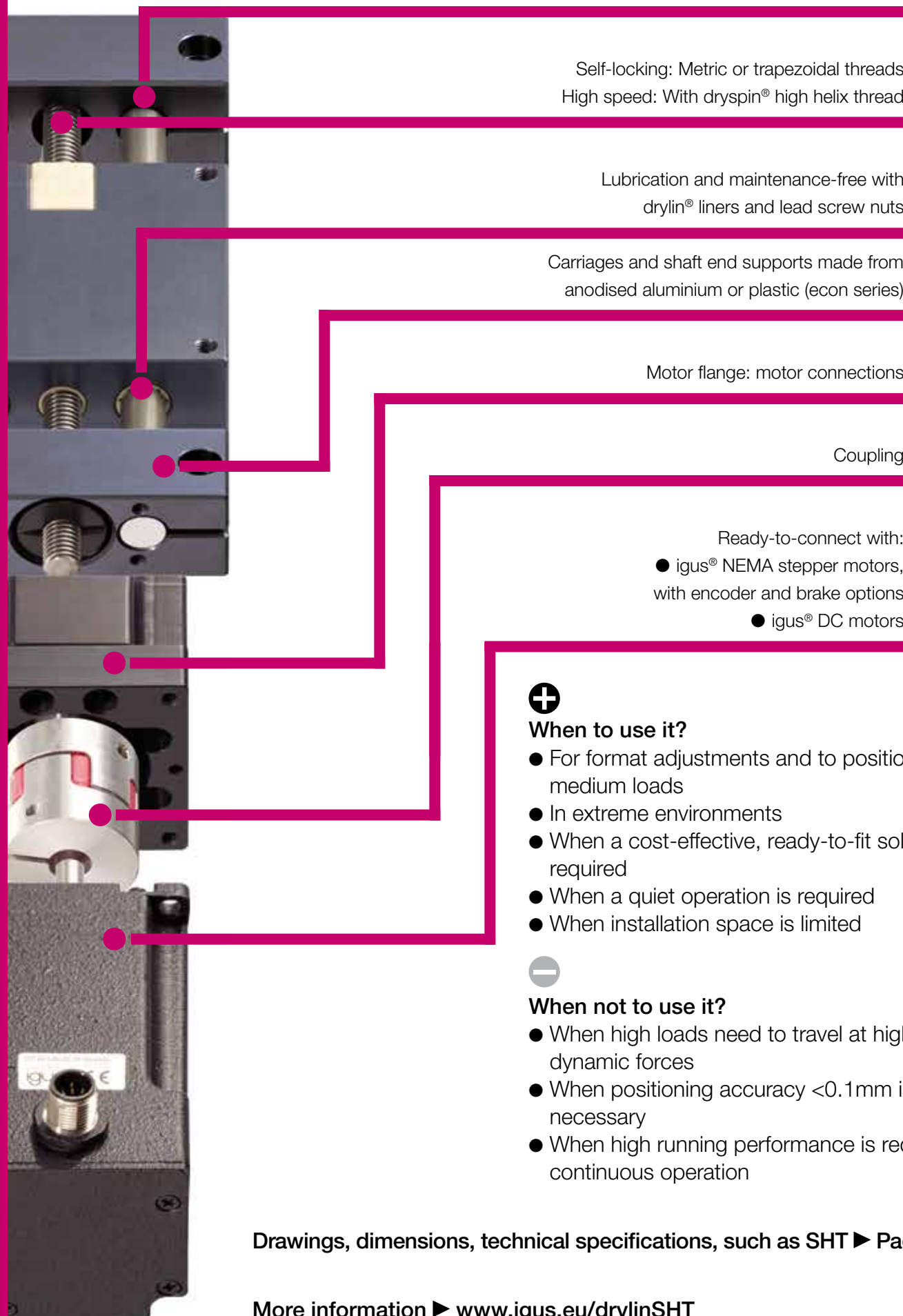
Extensive accessories





# drylin® E | Linear modules with motor

## Linear modules with lead screw drive



Different shaft materials or rail profiles

Self-locking: Metric or trapezoidal threads  
High speed: With dryspin® high helix thread

Lubrication and maintenance-free with  
drylin® liners and lead screw nuts

Carriages and shaft end supports made from  
anodised aluminium or plastic (econ series)

Motor flange: motor connections

Coupling

Ready-to-connect with:  
● igus® NEMA stepper motors,  
with encoder and brake options  
● igus® DC motors



### When to use it?

- For format adjustments and to position medium loads
- In extreme environments
- When a cost-effective, ready-to-fit solution is required
- When a quiet operation is required
- When installation space is limited



### When not to use it?

- When high loads need to travel at highly dynamic forces
- When positioning accuracy <0.1mm is necessary
- When high running performance is required in continuous operation

Drawings, dimensions, technical specifications, such as SHT ► Page 1291

More information ► [www.igus.eu/drylinSHT](http://www.igus.eu/drylinSHT)



# drylin® E | Linear modules with motor

## SHT/SHTC linear modules with motor

Drawings, dimensions, technical specifications, such as SHT  
► Page 1291



## SLW linear modules with motor

Drawings, dimensions, technical specifications, such as SLW  
► Page 1307



## SAW/SAWC linear modules with motor

Drawings, dimensions, technical specifications, such as SAW/SAWC  
► Page 1321



## SLT linear modules with motor

Drawings, dimensions, technical specifications, such as SLT  
► Page 1335



## SLN linear modules with motor

Drawings, dimensions, technical specifications, such as SLN  
► Page 1339



## SHTP linear modules with motor

Drawings, dimensions, technical specifications, such as SHTP  
► Page 1366



Further information about the motors  
► Page 1432



3D CAD files, prices and delivery time online ► [www.igus.eu/drylinSHT](http://www.igus.eu/drylinSHT) 1389

# drylin® E | Linear axes with motor

## Linear axes with toothed belt



End supports with ball bearing

Hard-anodised drylin® W aluminium profile (high-profile shape)

Polyurethane or neoprene toothed belts

Various carriage lengths

Lubrication and maintenance-free drylin® W linear profile guides

Motor flange: motor connections

Coupling



### When to use it?

- Fast positioning of small loads
- Quiet operation
- Slim design
- Continuous operation



### When not to use it?

- When high loads must be motion controlled at high dynamic speeds
- When positioning accuracy <0.1mm is required

- Ready-to-connect with
- igus® NEMA stepper motors, with encoder and brake options
  - igus® DC motors

Drawings, dimensions, technical specifications, such as ZLW ► Page 1343

# drylin® E | Linear axes with motor

## Series ZLW linear modules with motor

Drawings, dimensions, technical specifications, such as ZLW  
► Page 1343

## ZLW modular axes with motor

Drawings, dimensions, technical specifications, such as ZLW  
► Page 1356

## ZAW cantilever axis with motor

Drawings, dimensions, technical specifications, such as ZAW  
► Page 1413

## econ linear axis with motor

Drawings, dimensions, technical specifications, such as ZLW econ  
► Page 1371



Further information about the motors  
► Page 1432

# drylin® E | Linear axes with motor

## Linear axes with rack



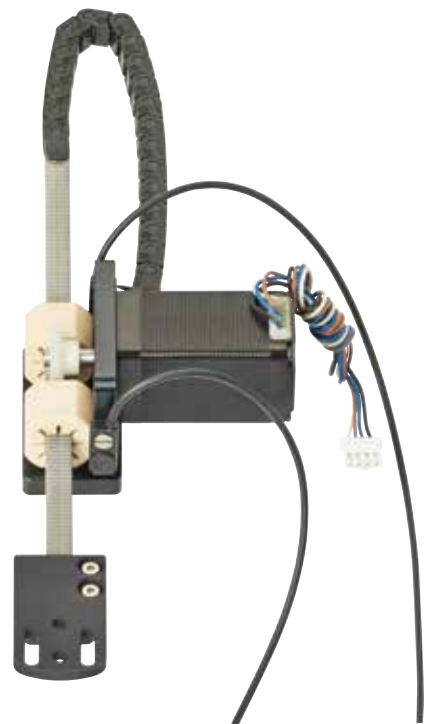
Cantilever axis with GRW rack and pinion drive

Drawings, dimensions, technical specifications, such as GRW  
► Page 1410



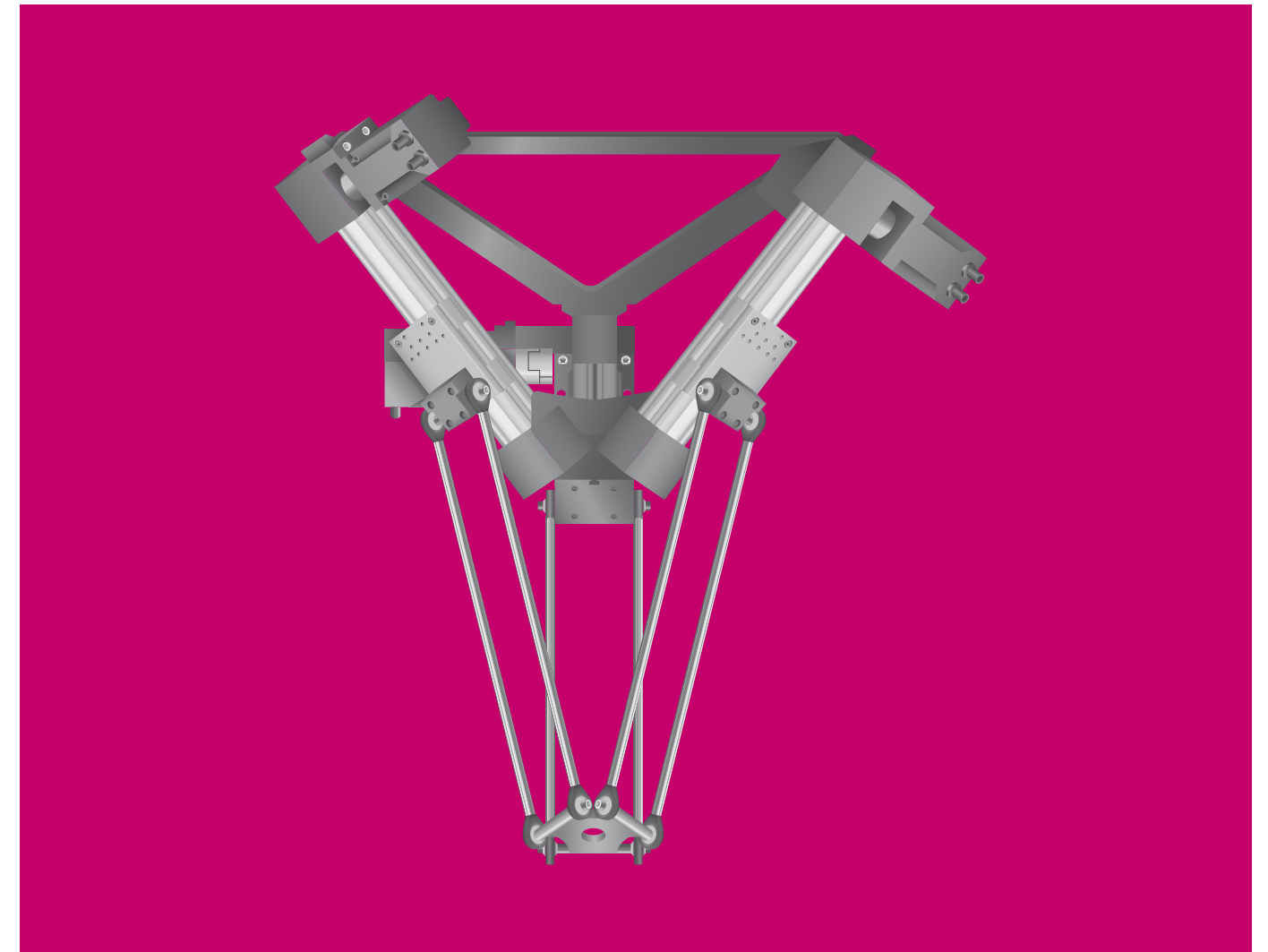
Lightweight z-axis GRR

Drawings, dimensions, technical specifications, such as GRR  
► Page 1412



Cantilever axis with GRQ rack and pinion drive

Drawings, dimensions, technical specifications, such as GRQ  
► Page 1411



## drylin® electric drive technology – Automation

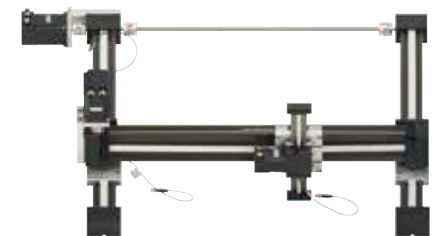
Multi-axis linear robots in 24hrs

Delta robots

Lead screw motors

Cantilever axis

Motor control systems



Further information about the motors  
► Page 1432



## Multi-axis modular linear robots

Lubrication-free drylin® W profile guides

Drive: lead screw, toothed belt or rack

Accessories included for the linear robot setup

drylin® drive units with defined stroke lengths

Ready-to-install with NEMA stepper motors

Machine reliability with encoder

Multi-axis linear robots are systems that run in predefined areas or "rooms". Our drylin® linear robots are based on proven tribo-technology, i.e. all systems use sliding self-lubricating linear units, so that a lifelong operation without external lubrication is possible. Typical application areas are automation for pick and place, measuring and test automation, assembly handling, marking devices, handling tasks in Low Cost Automation, autonomous assembly cells and everything on the subject of "end-of-the-line".

- Maintenance-free dry operation
- Quiet operation
- Resistance to dust and dirt
- Corrosion-free
- Standard product range available in within 24hrs
- Free consultation and installation at your premises

### Typical application areas

- Pick and place
- Measurement and testing
- Labelling technology
- Component marking
- Assembly cells
- Sorting machines
- Safety systems



### Available from stock

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.

## Ready-to-install linear robots available from stock in 24hrs

Toolmakers and their suppliers are facing major global challenges. The competition is becoming more intense, the price pressure is becoming greater, including the demand for local production. We offer complete cost-effective systems that automate tasks in order to produce faster and more effectively.



### Multi-axis linear robots

- Pre-configured assembly kits available from stock
  - 3 different linear robot structures: line/flat/room
  - For workspaces of up to 500 x 500 x 100mm
- From page 1396



### Delta robots

- For a workspace of up to Ø360mm
  - Kit or pre-installed kinematics
  - dryve motor control system available
- From page 1400



### Lead screw motors

- Precise and efficient
  - Compact structure, variable lead screw pitches
  - Stepper motors with/without encoder
- From page 1405



### Cantilever axis

- As z-axis for linear robot structures
  - For pick & place applications
  - With toothed belt or rack
- From page 1409

## igus® motor control systems



### D1 dryve

- Motor control for stepper motors
- From page 1416



### D3 dryve

- Motor control for DC motors
- From page 1417

Line robot – for vertical working planes



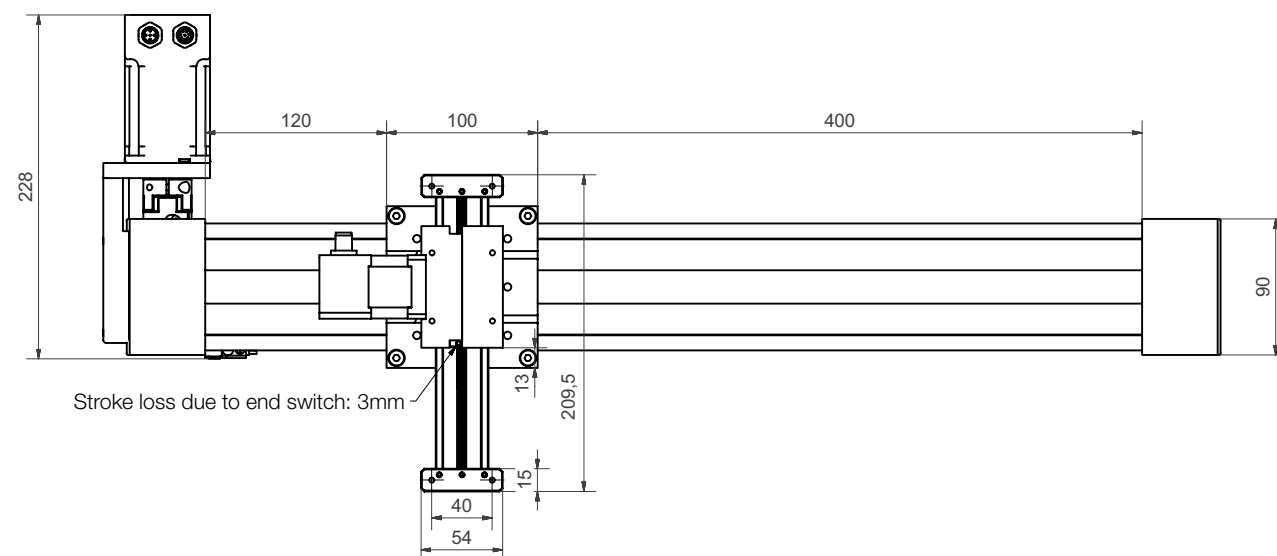
- **x-axis:** drylin® GRW-0630 rack and pinion drive with NEMA17 stepper motor with encoder
- **y-axis:** drylin® ZLW-1080 toothed belt axis with NEMA23 stepper motor with encoder
- Proximity switches available

**Technical data**

<b>Workspace:</b>	500 x 100mm
<b>Max. speed:</b>	1.0m/s
<b>Max. acceleration:</b>	3.0m/s <sup>2</sup>
<b>Repeatability:</b>	0.2mm
<b>Load capacity:</b>	25N



**Part No.**  
**DLE-LG-0001**



Flat linear robot – for predefined surfaces

**DLE-FG-0001**

- **x-axis:** drylin® ZLW-0630 toothed belt axis with NEMA17 stepper motor with encoder
- **y-axis:** drylin® ZLW-0630 toothed belt axis with NEMA17 stepper motor with encoder
- Proximity switches available

**Technical data**

<b>Workspace:</b>	300 x 300mm
<b>Max. speed:</b>	1.5m/s
<b>Max. acceleration:</b>	10m/s <sup>2</sup>
<b>Repeatability:</b>	0.3mm
<b>Load capacity:</b>	80N

**DLE-FG-0002**

- **x-axis:** drylin® ZLW-0630 toothed belt axis with NEMA17 stepper motor with stranded wire
- **y-axis:** drylin® ZLW-0630 toothed belt axis with NEMA17 stepper motor with stranded wire
- Proximity switches available

**Technical data**

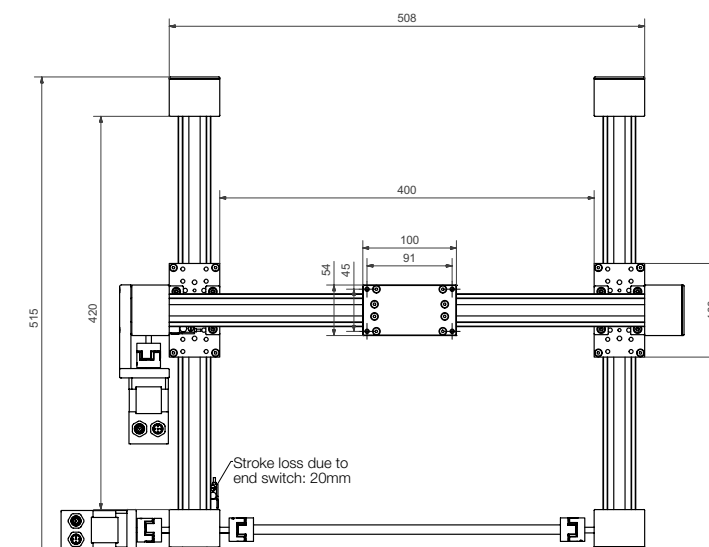
<b>Workspace:</b>	300 x 300mm
<b>Max. speed:</b>	1.5m/s
<b>Max. acceleration:</b>	10m/s <sup>2</sup>
<b>Repeatability:</b>	0.3mm
<b>Load capacity:</b>	80N

**DLE-FG-0003**

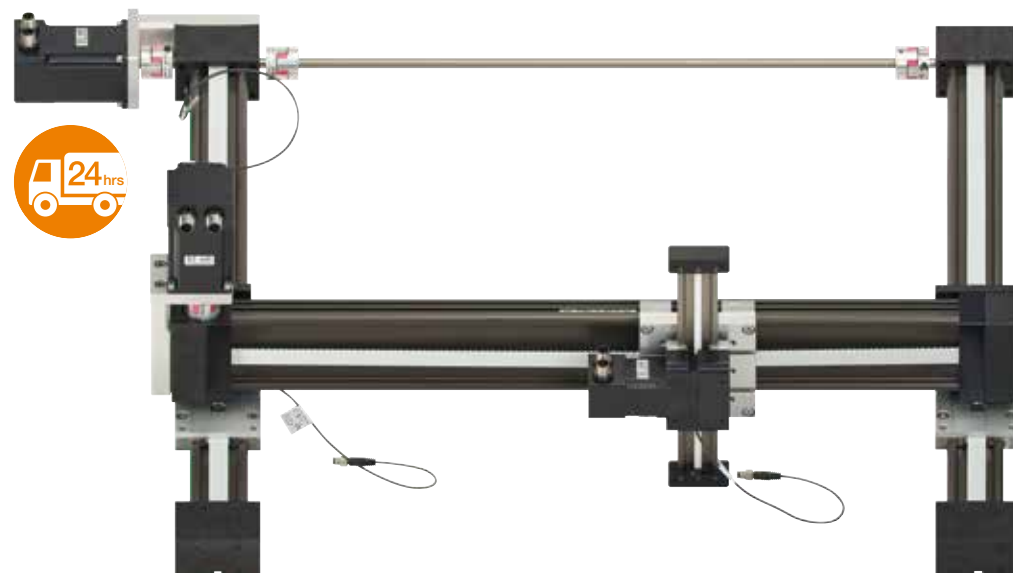
- **x-axis:** drylin® ZLW-1040 econ toothed belt axis with NEMA23 stepper motor with stranded wire
- **y-axis:** drylin® ZLW-1040 econ toothed belt axis with NEMA17 stepper motor
- Proximity switches available

**Technical data**

<b>Workspace:</b>	500 x 500mm
<b>Max. speed:</b>	0.5m/s
<b>Max. acceleration:</b>	1m/s <sup>2</sup>
<b>Repeatability:</b>	1mm
<b>Load capacity:</b>	10N



**Part No.**  
**DLE-FG-0001 version with encoder**  
**DLE-FG-0002 version with stranded wires**  
**DLE-FG-0003 econ version**  
► Page 1372

**DLE-RG-0001**

- **x-axis:** drylin® ZLW-1040 toothed belt axis with NEMA23 stepper motor with encoder
- **y-axis:** drylin® ZLW-1080 toothed belt axis with NEMA23 stepper motor with encoder
- **z-axis:** drylin® GRW cantilever axis with rack and pinion drive and NEMA17 stepper motor with encoder

**Technical data**

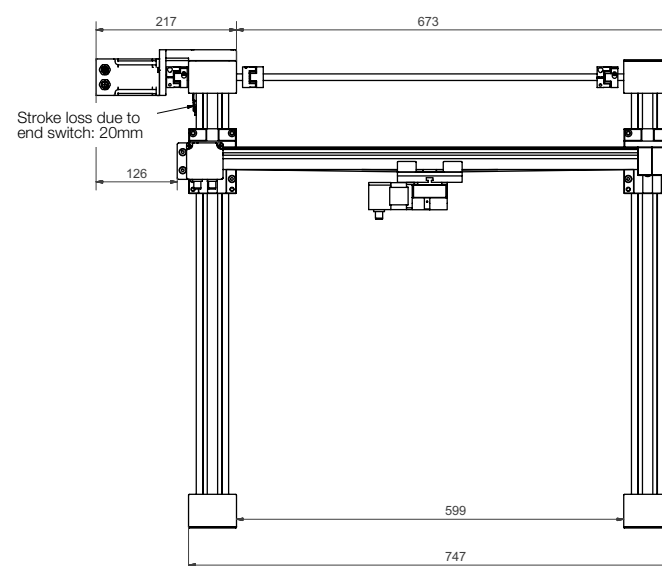
<b>Workspace:</b>	500 x 500 x 100mm
<b>Max. speed:</b>	0.5m/s
<b>Max. acceleration:</b>	1.5m/s <sup>2</sup>
<b>Repeatability:</b>	0.8mm
<b>Load capacity:</b>	25N

**DLE-RG-0002**

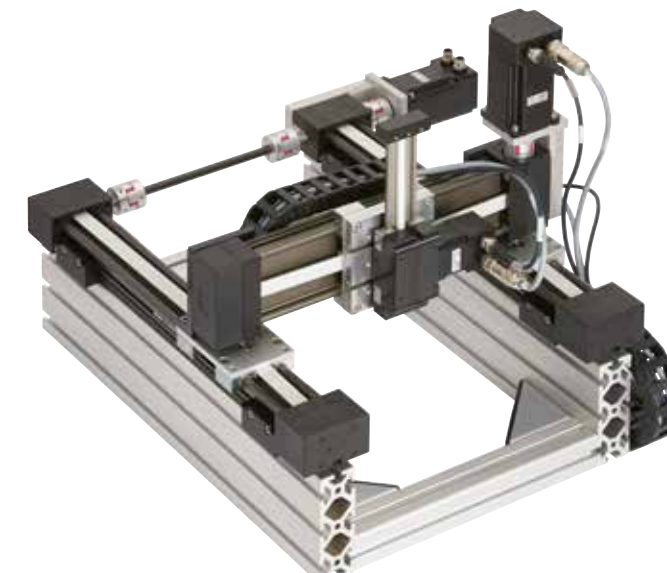
- **x-axis:** drylin® ZLW-0630 toothed belt axis with NEMA23XL stepper motor with encoder
- **y-axis:** drylin® ZLW-0660 toothed belt axis with NEMA23 stepper motor with encoder
- **z-axis:** drylin® GRW-0630 cantilever axis with NEMA7 stepper motor with encoder

**Technical data**

<b>Workspace:</b>	400 x 400 x 100mm
<b>Max. speed:</b>	0.5m/s
<b>Max. acceleration:</b>	1.5m/s <sup>2</sup>
<b>Repeatability:</b>	0.8mm
<b>Load capacity:</b>	25N



**Part No.**  
**DLE-RG-0001**  
**DLE-RG-0002**



- For small installation spaces: extremely small and compact
- Cost saving due to parallel synchronisation
- 100% tested
- Installation height from 30mm
- Repeatabilities up to 0.05mm

- Outsourcing of engineering costs
- Everything from one source
- Completely ready-to-fit
- Gripper and camera directly adaptable
- Delivery in modules
- Design integration into your machine
- Combination with robolink® joint automation



Submit an enquiry directly online for a linear robot in accordance with your application and installation parameters



**Customised linear robot request**  
► [www.igus.eu/linear-robot-request](http://www.igus.eu/linear-robot-request)



**Available upon request**

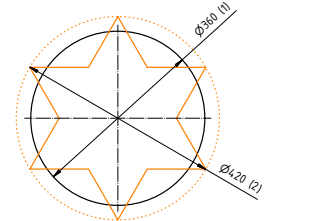
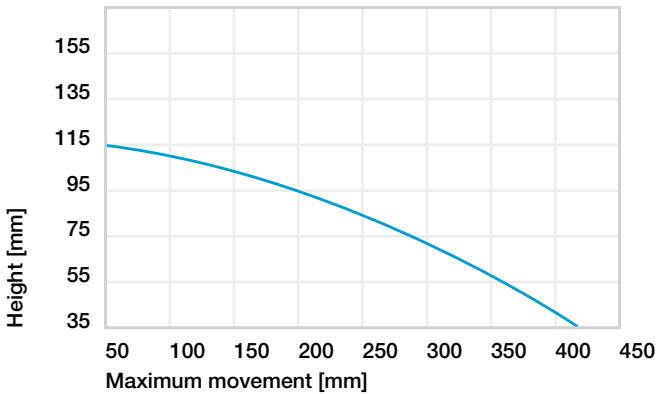
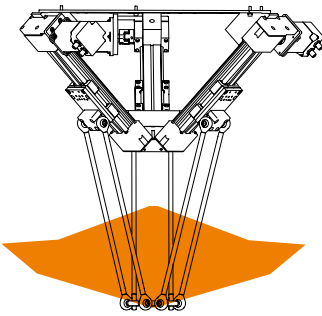
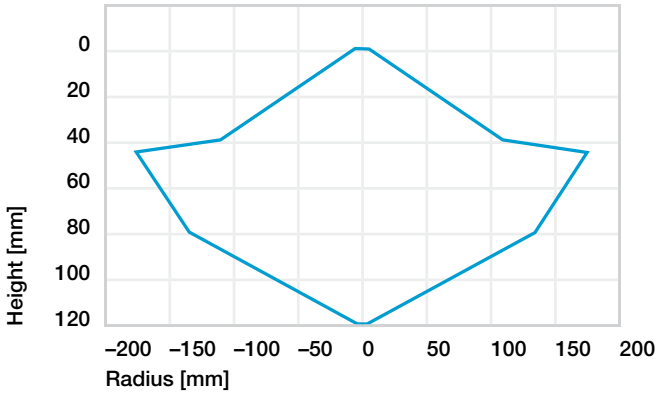
Detailed information about delivery time online.



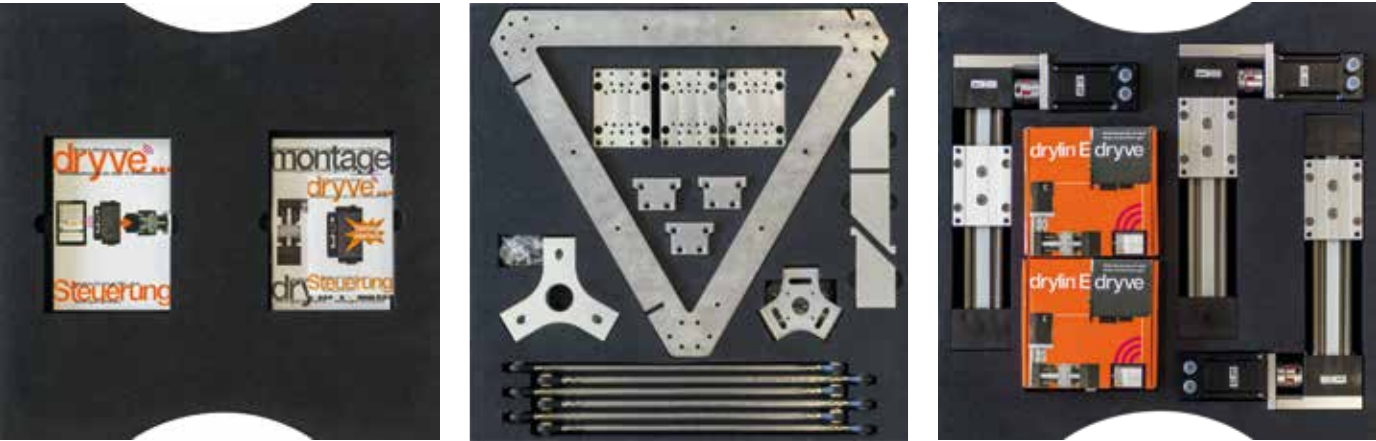


- Delta robot consisting of:
- 3 drylin® toothed belt axis with NEMA23XL stepper motor with encoder
  - Lightweight igubal® delta kinematics
  - Mounting brackets for mounting in a frame and possibilities of adaptation for grippers/motor: with or without D1 dryve stepper motor control units.
  - As a construction kit or completely pre-assembled in a transport rack.
  - Optional accessories: initiator kits, motor encoders and sensor cables

Technical data	
Positioning accuracy	± 0.5mm
Working area diameter at 75mm	360mm
Max. payload	5kg
Max. process force at radius 0mm	100N
Dynamics at 500g	min. 60 picks/min
Mass	15kg
Max. track speed	3m/s
Max. acceleration	60m/s²

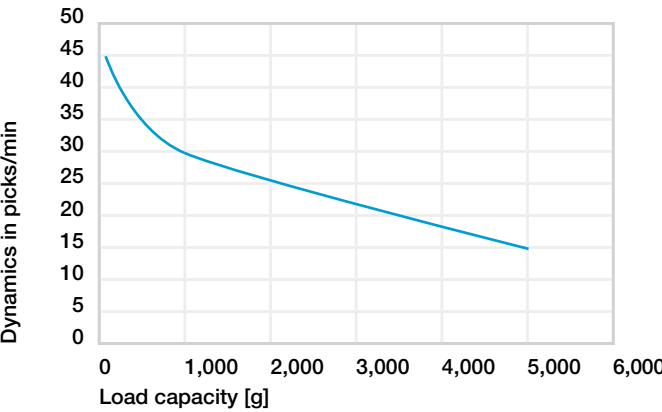


Travel at a height of 75mm

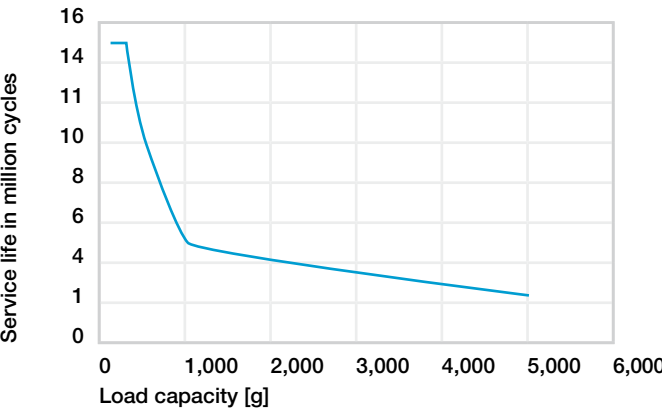


Optional accessories: initiator kits, motor encoders and sensor cables

Part No.	Description
DLE-DR-0001	Delta robot, kit in compact transport box
DLE-DR-0002	Delta robot, pre-installed kinematics, in transport rack made of profiled rails
DLE-DR-0003	Delta robot, kit in compact transport box, incl. 3x D1 dryve stepper motor control units
DLE-DR-0004	Delta robot, pre-installed kinematics, in transport box made of profiled rails, incl. 3x D1 dryve stepper motor control units



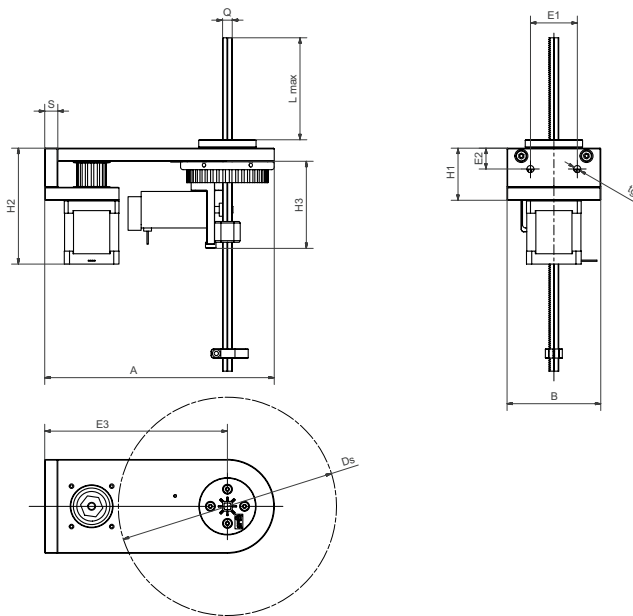
You can get the highest (picks/min) by using a master control system with path planning function. (e.g. Sinus acceleration ramp and optimised motor control parameters). Graph as shown applies to a load motor voltage of 48 [V] mounted in a stable and vibration-free frame.



**drylin® HSQ | Lift/swivel units | Product range**  
Compact, modular and lubrication-free



- Toothed, hard-anodised, corrosion-resistant square hollow section
- Combination with iglidur® J low friction element
- Modular design
- Drive: NEMA11 stepper motor



**i** Further motors upon request/suitable initiators available

**Dimensions [mm]**

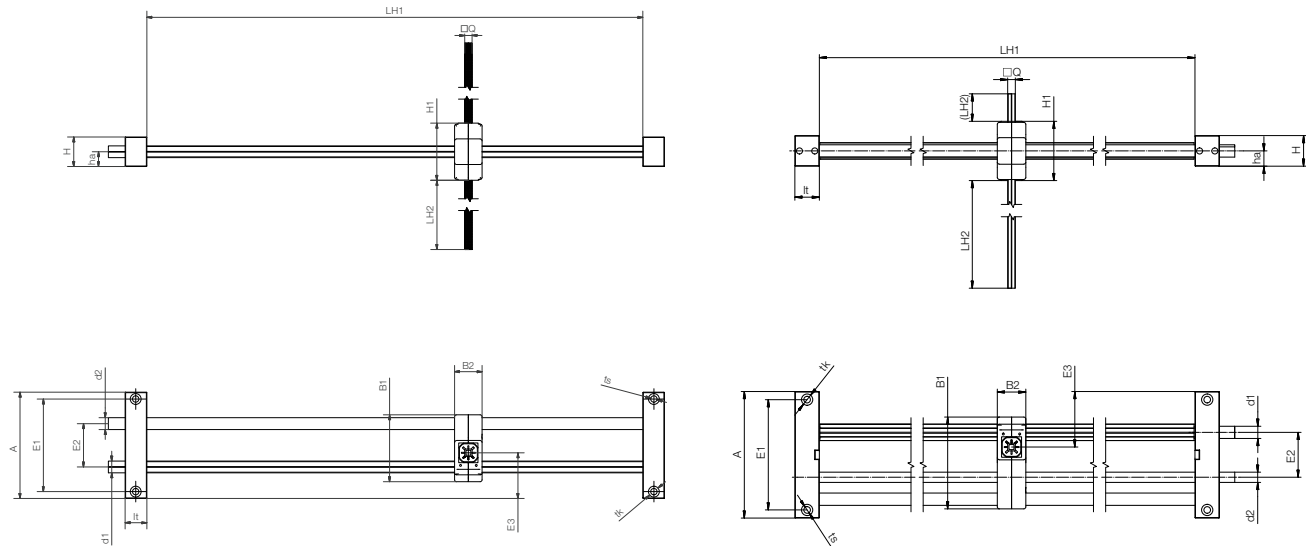
Part No.	F	vL	vR	Lmax.	(Ds)	A	B	H1	(H2)	(H3)	E1	E2	E3	Q	tg	S
	[g]			±0.15	±0.15		±0.15		±0.3						h9	
HSQ-10-1440-...	300	0.5	0.4	200	168	177	72	40	89	67	36	16	140	7.5	5.3	10

**Order example**  
**HSQ-10-1440-A-xxx-17-L-11-L**  
(incl. stepper motor NEMA17/11 with stranded wire)  
**HSQ-10-1440-A-xxx-17-E-11-E**  
(incl. stepper motor NEMA17/11 with encoder)

**drylin® SLQ | Linear modules | Product range**  
Torque-resistant, controlled separately

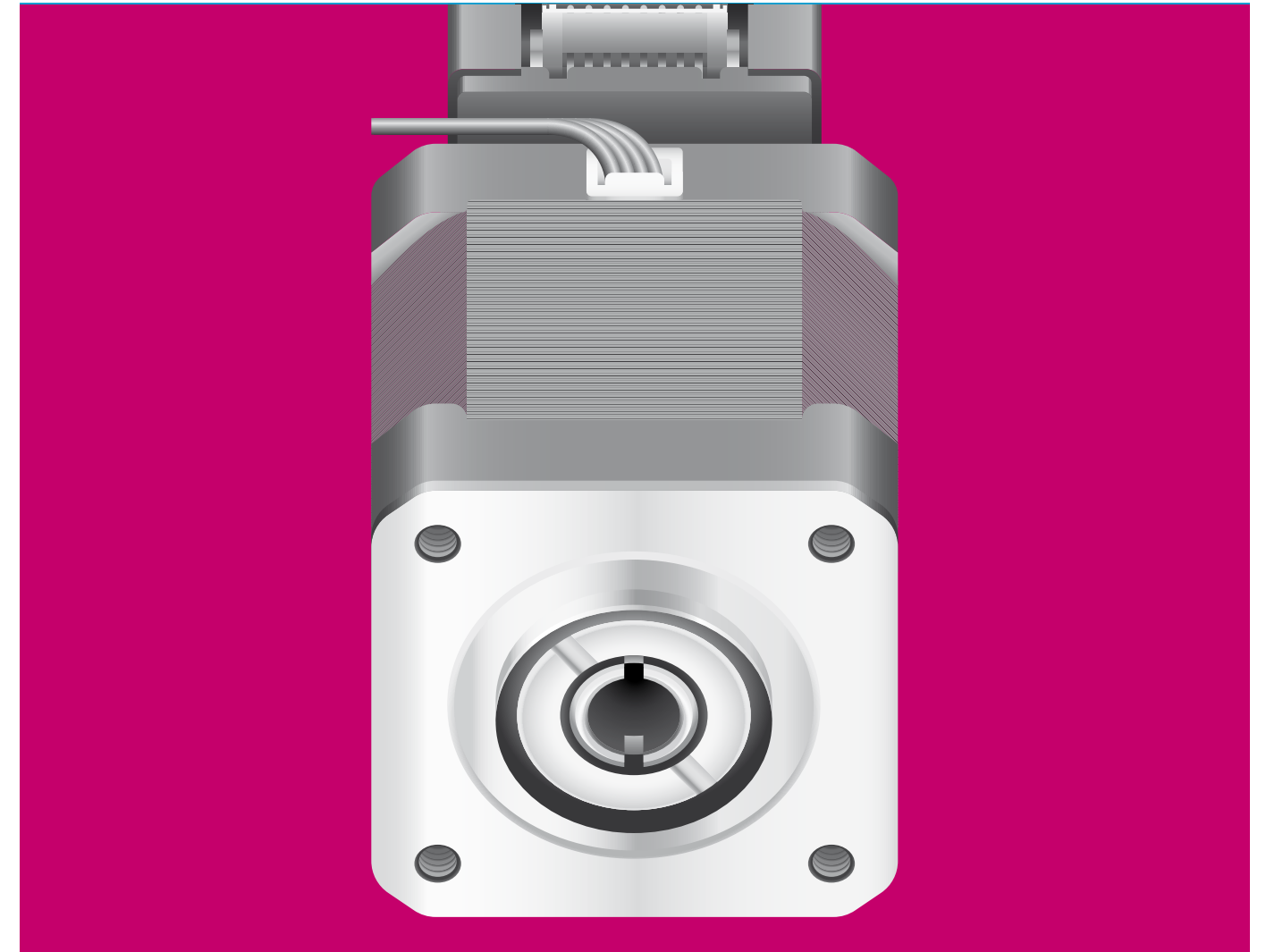
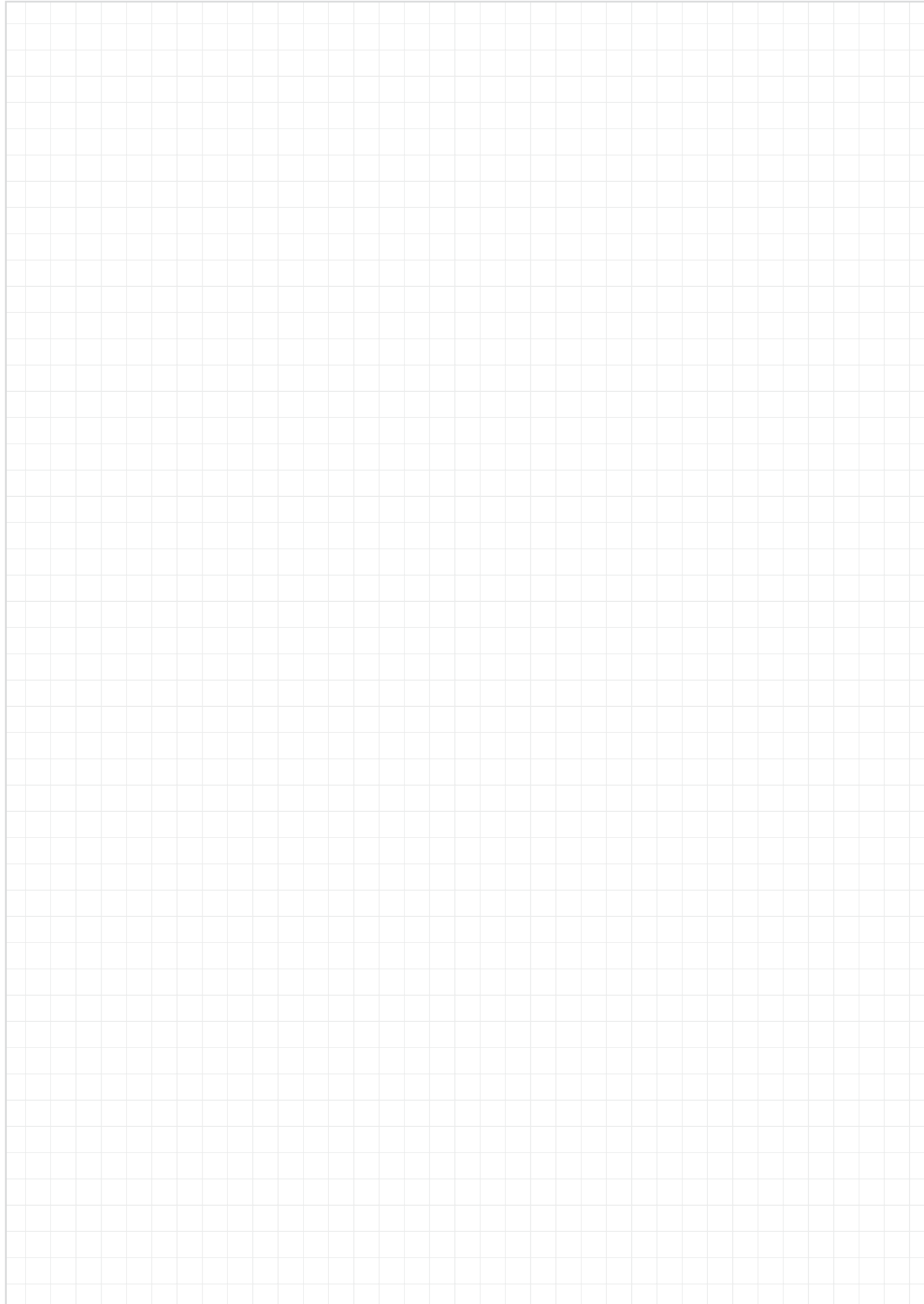


- Torque-resistant, lubrication-free linear module. Low mass and compact in the working area.**
- One linear module with two directions of motion which can be controlled separately. This way, both drives are located outside the working area. This saves space and no unnecessary motor weight is moved. The linear guide is torque-resistant and thanks to the compact modular construction, high speeds can be reached with low power.
- Quiet and lightweight
  - No electronics in the working area
  - Compact structure
  - Corrosion-resistant
- Typical application areas:**
- Medical technology
  - Pick & Place
  - Gripper technology



**Dimensions [mm]**

Part No.	Max. axial F [N]	LH1	LH2	H	H1	ha	A	E1	E2	E3	B1	B2	lt	d1	d2	ts	tk
SLQ-1210-...	200	500	200	30	58	15	108	94	44	46.5	68	28	22	12	12	6.6	-
SLQ-121012-...	2	500	200	30	58	15	124	108	44	30.0	90	28	22	12	10	6.6	11



## drylin<sup>®</sup> electric drive technology – Lead screw motors

Seven lead screw types with 0.8-50mm pitch

Maximum precision by centring the lead screw

The lead screw can be attached on either side

Space-saving, versatile

Available for delivery ready for connection with  
drylin<sup>®</sup> SAWC and SLN linear units





# Efficient, precise and compact – drylin® lead screw motors

drylin® E with the lead screw motor range is the optimum solution for systems that need a stepper motor and integrated lead screw. The stand-alone versions have a compact design and are available with NEMA stepper motors with or without an encoder. The lead screw is centred and, in combination with the dryspin® high helix thread technology, the system has a long service life.

- 3 stepper motor sizes
- Lubrication-free drylin® lead screw technology
- Can be delivered ready for connection

## Typical application areas

- Medical technology
- Tool building
- Laboratory technology



**Available from stock**  
Detailed information about delivery time online.



**Price breaks online**  
No minimum order value. No minimum order quantity.



**Product finder**  
► [www.igus.eu/drylinE-finder](http://www.igus.eu/drylinE-finder)



Stand-alone solution for customer requirements – with or without encoder



- Stepper motors in three different sizes with stranded wire and 0.1-2Nm holding torque
- Seven lead screw types with 0.8-50mm pitch
- Maximum precision by centring the lead screw with a H7/h7 motor/lead screw fit
- Matching lead screw nuts in the drylin® product range
- When using a stepper motor without an encoder the lead screw can be attached on either side
- Space-saving, versatile
- Available for delivery ready for connection with drylin® SAWC, SLN and SLT linear axes

## Technical data – stepper motor with stranded wire

Part No.	Motor size	Distance over hubs [mm]	Holding torque [Nm]	Shaft load axial [N]	Encoder
MOT-ST-28-L-A-A	NEMA11	28	0.1	50	no
MOT-ST-42-L-A-A	NEMA17	42	0.5	100	no
MOT-ST-56-L-A-A	NEMA23	56	2.0	500	no
MOT-ST-28-L-C-A	NEMA11	28	0.1	50	yes
MOT-ST-42-L-C-A	NEMA17	42	0.5	100	yes
MOT-ST-56-L-C-A	NEMA23	56	2.0	500	yes

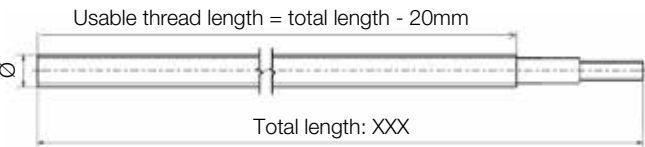


**Detailed technical data online**  
► [www.igus.eu/drylinE](http://www.igus.eu/drylinE)

Lead screw with precision machined ends



- Material: stainless steel
- Lead screw needs to be secured with an adhesive
- Ready to fit



Technical data – high helix thread with dryspin® technology

Part No.	Motor size	Distance over hubs	Thread type	Lead screw Ø	Lead	Max.
		[mm]		[mm]	P	Length
DST-LS-MOT-6.35X2.54-R-XXX-ES	NEMA11	28	DST	6.35	2.54	300
DST-LS-MOT-6.35X25.4-R-XXX-ES	NEMA11	28	DST	6.35	25.4	300
DST-LS-MOT-10X12-R-XXX-ES	NEMA17/23	42 / 56	DST	10	12	500
DST-LS-MOT-10X25-R-XXX-ES	NEMA17/23	42 / 56	DST	10	25	500
DST-LS-MOT-10X50-R-XXX-ES	NEMA17/23	42 / 56	DST	10	50	500
DST-LS-MOT-14X25-R-1000-ES	NEMA17/23	42 / 56	DST	14	25	500

Technical data – trapezoidal lead screw

Part No.	Motor size	Distance over hubs	Thread type	Lead screw Ø	Lead	Max.
		[mm]		[mm]	P	Length
PTGSG-MOT-M5X0,8-R-XXX-ES	NEMA11	28	M5	5	0.8	250
PTGSG-MOT-08X1,5-R-XXX-ES	NEMA17/23	42 / 56	Tr	8	1.5	300
PTGSG-MOT-10X2-R-XXX-ES	NEMA17/23	42 / 56	Tr	10	2	500
PTGSG-MOT-12X3-R-XXX-ES	NEMA17/23	42 / 56	Tr	12	3	500
PTGSG-MOT-12X6P3-R-XXX-ES	NEMA17/23	42 / 56	Tr	12	6P3	500

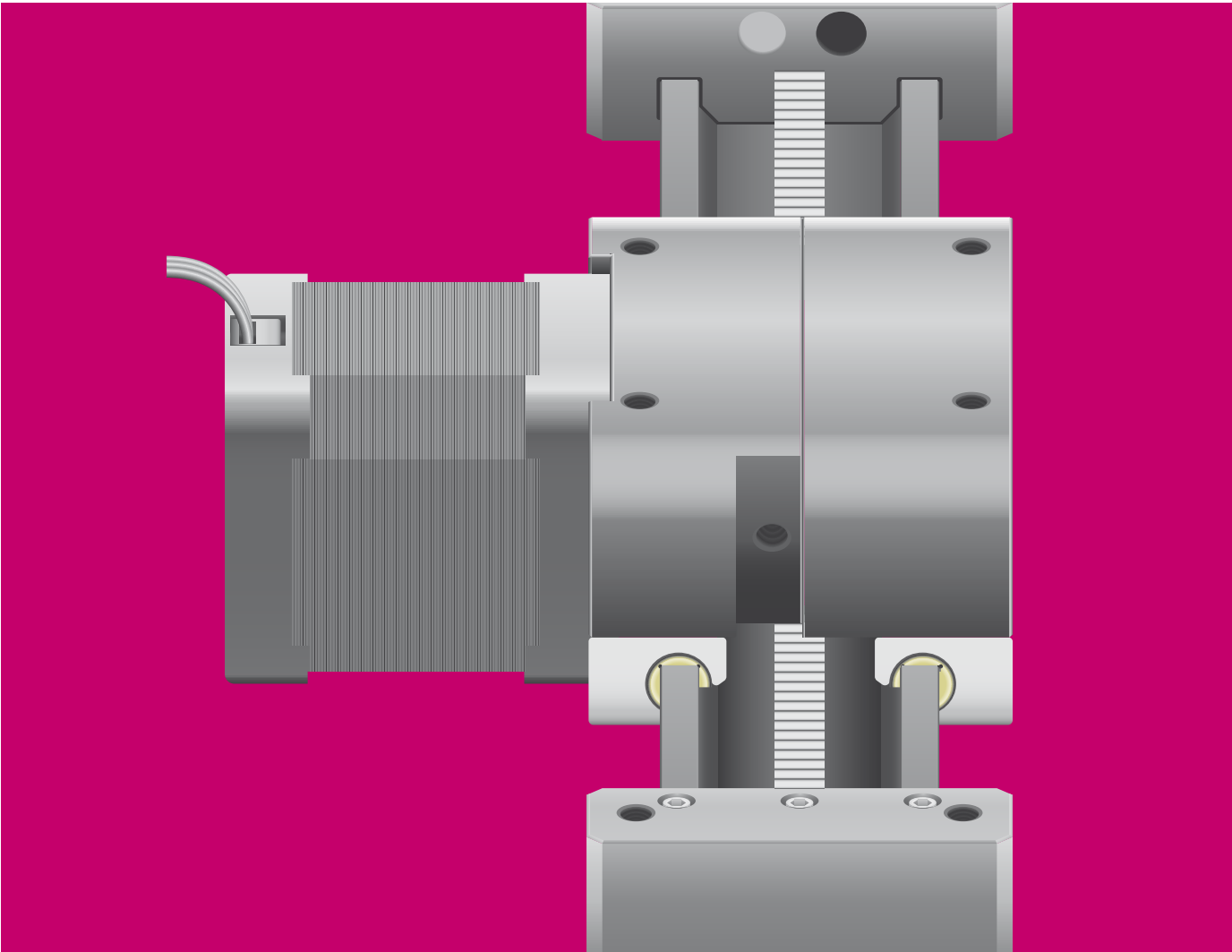
XXX: Lead screw length



If desired by the factory, please order using the following assembly number:  
Assembly front: MONT004F000 (flange side)  
Assembly back: MONT004B000 (assembly not possible with a motor with an encoder)



Lead screw needs to be secured with an adhesive (Loctite 648)!  
  
Curing time: after 6 hours approximately 50%  
after 24 hours 100%



# drylin® electric drive technology – Cantilever axes

High dynamics

Drive: rack or toothed belt

Lightweight design

For z-axis in multi-axis gantries

Lubrication and maintenance-free

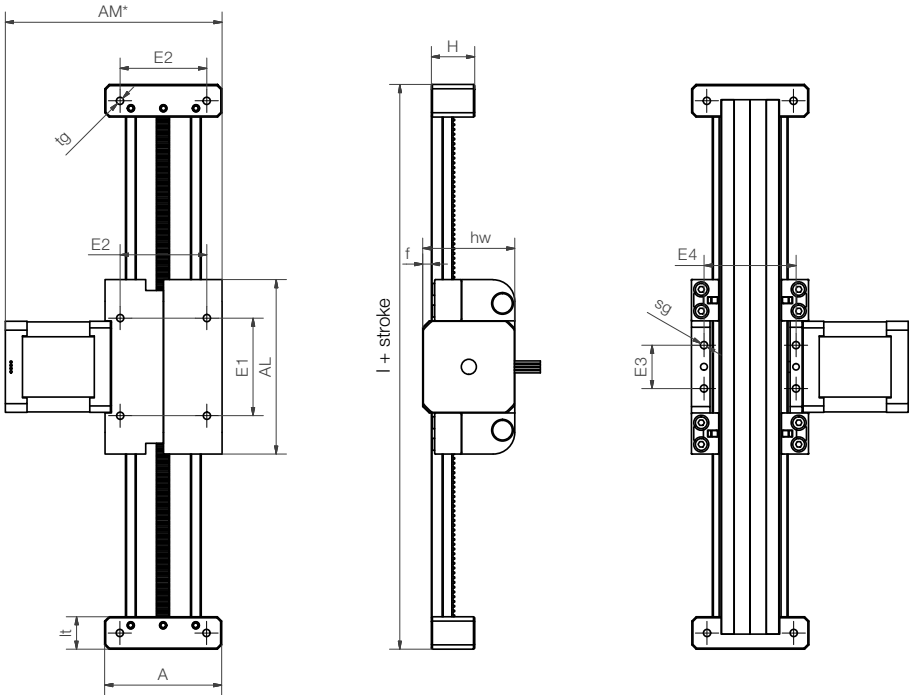


# drylin® GRW | Cantilever axes | Product range

Dynamic z-axis for linear robot structures



- Direct force transfer via rack
- Compact structure
- Handling for loads up to 10N
- Available accessories ► **Page 1419**
- Available with motor ► **Page 1373**



Technical data

Part No.	Stroke length [mm]	Weight [kg]	Additional (per 100mm)	Max. feed rate [mm/rev]	Max. load axial [N]
GRW-0630-A	150	0.5	0.1	44	10
GRW-0630-B	300	0.5	0.1	44	10

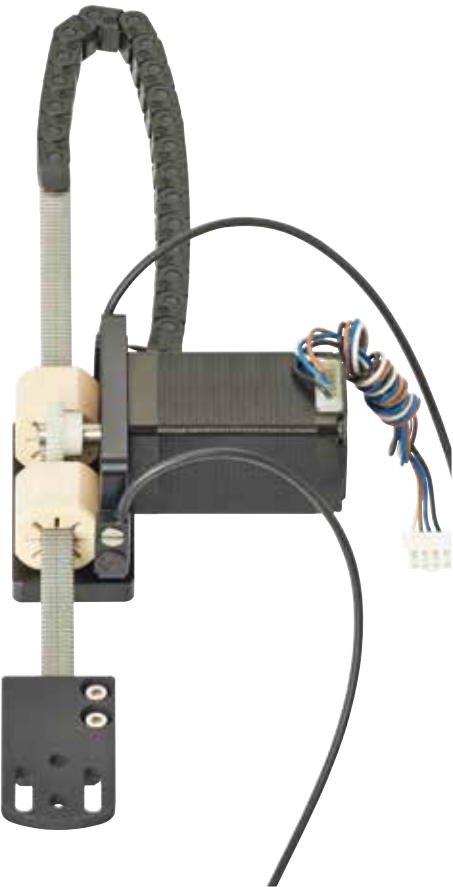
Dimensions [mm]

Part No.	A	Al	H	E1	E2	E3	E4	I	It	hw	f	AM <sup>131)</sup>	tg	sg
	-0.3			+0.15	+0.15									
GRW-0630-A	54	80.5	20	45	40	20	42.5	110.5	15	42.5	4	100.0	M4	M4-8
GRW-0630-B	54	80.5	20	45	40	20	42.5	110.5	15	42.5	4	121.4	M4	M4-8

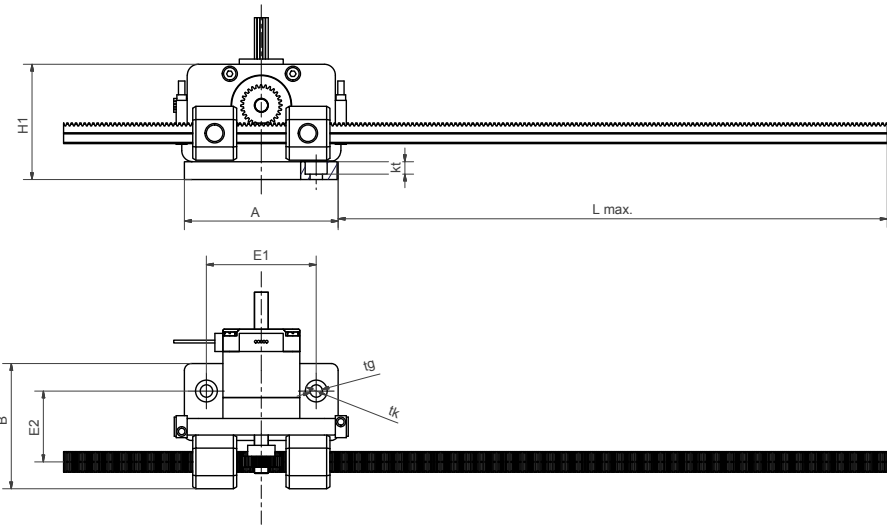
<sup>131)</sup> Depending on the type of motor

# drylin® GRQ | Gripper axes | Product range

Extremely light axis for Pick & Place



- Toothed, hard-anodised and corrosion-resistant square hollow section
- Loads up to 500g with a speed of up to 0.7m/s
- iglidur® J plain bearings
- Drive: NEMA11 stepper motor with gear wheel



Dimensions [mm]

Part No.	F	v	L	A	H1	E1	E2	B	tg	tk	kt	B	Q	D2
	[N]	[m/s]	Max.											
GRQ-10-A-56-120-11-L-01-000	5	0.7	200	56	42	40	26	46	4.5	8	4.5	52	7.5	22



# drylin® GRR | Lightweight z-axis | Product range

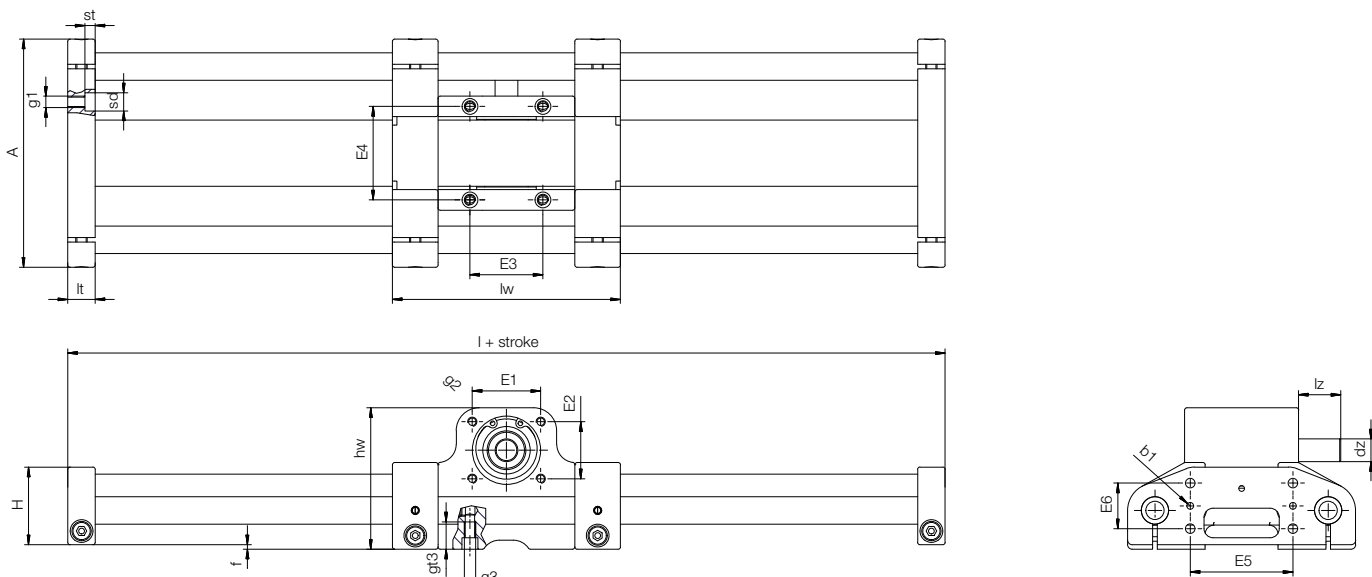
drylin® GRR lightweight z-axis with direct rack drive



- Light z-axis for strokes up to 500mm
- Axis weight of only 1.45kg with 500mm stroke
- Made from aluminium and plastic
- Dynamic mass of only 0.9kg enables fast operation
- Ideal for linear robots
- Direct rack drive
- Torsionally rigid due to drylin® AWMR aluminium hollow shafts
- Lubrication-free and maintenance-free due to drylin® R liners

Typical application areas:

- Handling
- Sprue pickers
- Room linear robots
- Lifting equipment
- Lab automation



Technical data

Part No.	Max. stroke length [mm]	Transmission [mm/rev]	Tooth profile	Weight without stroke [kg]	Max. load [kg]
GRR-1280	750	72.26	Module 1	0.86	0.12

Dimensions [mm]

Part No.	L	A	H	lw	hw	lz	dz	f	lt	E1	E2	g2
GRR-1280	124	100	34	100	62	18	10	2	12	30	25	M4-10

Part No.	E3	E4	g3	gt3	E5	E6	g1	sd	st	b1
GRR-1280	32	41	M5	12	45	20	M5	8	4.5	3

# drylin® ZAW | Toothed belt axes | Product range

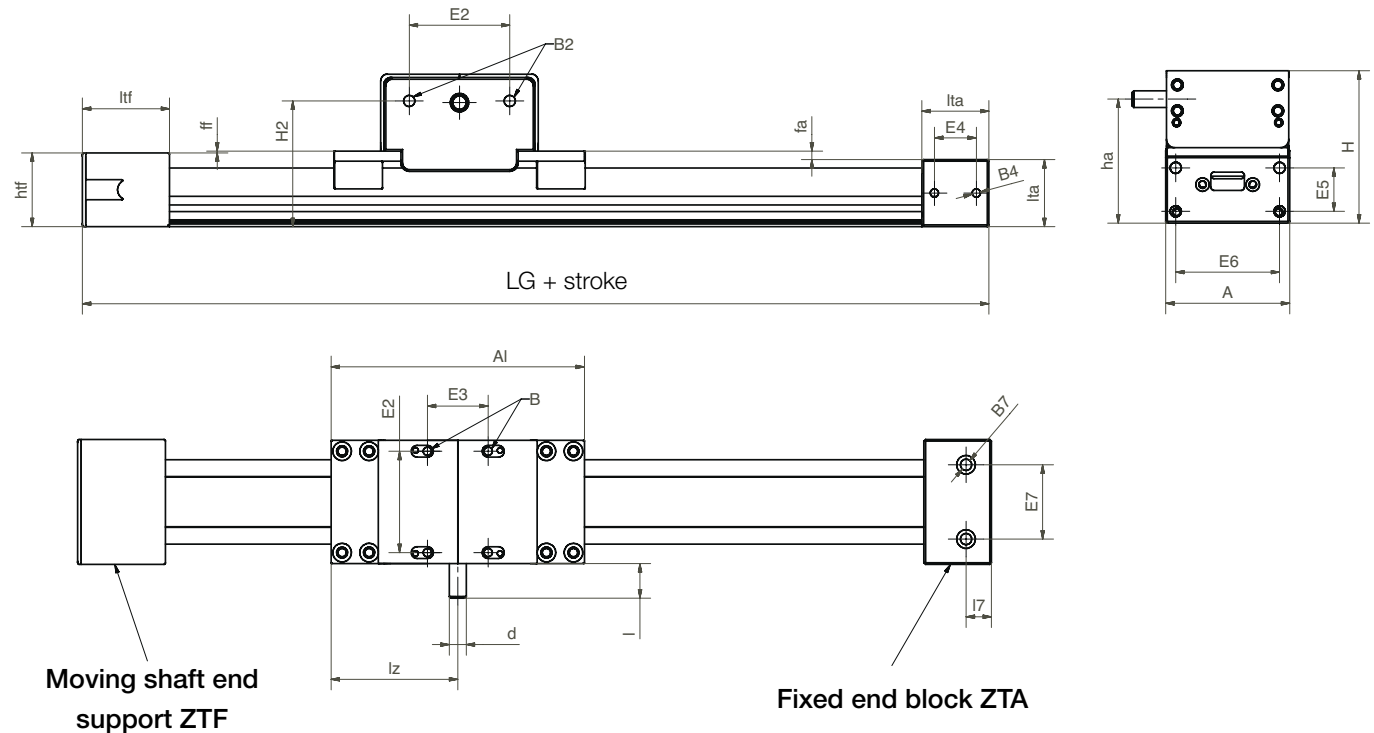
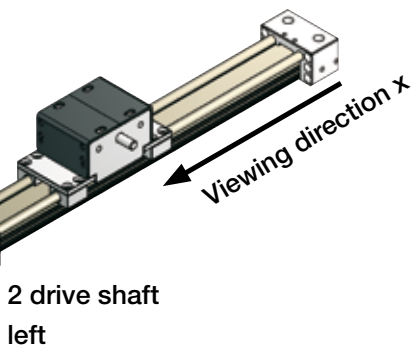
Cantilever axis



- Fixed drive unit
- Hard-anodised aluminium axis profile
- Lightweight
- Max. stroke 1,000mm
- Max. axial load 50N
- Permissible load for carriage  $M_{y\max}$ : 15Nm



1 drive shaft  
right



Dimensions [mm]

Part No.	A	H	H2	LG	Al	ha	d	I	I7	lz	E2	E3
ZAW-1040	-0.3	91	75	242	±0.3	±0.1	h9	+1	15	75	±0.15	±0.15

Part No.	B	B2	htf	ltf	ff	fa	lta	E4	B4	B7	E5	E6	E7
Connecting dimensions	-0.3			±0.3	±0.1	h9	±0.1		±0.15		±0.15		
ZAW-1040	M6	M8	44	52	2	5	40	20	M6	M6	26	62	44

drylin® QLA | Linear actuator | Product range

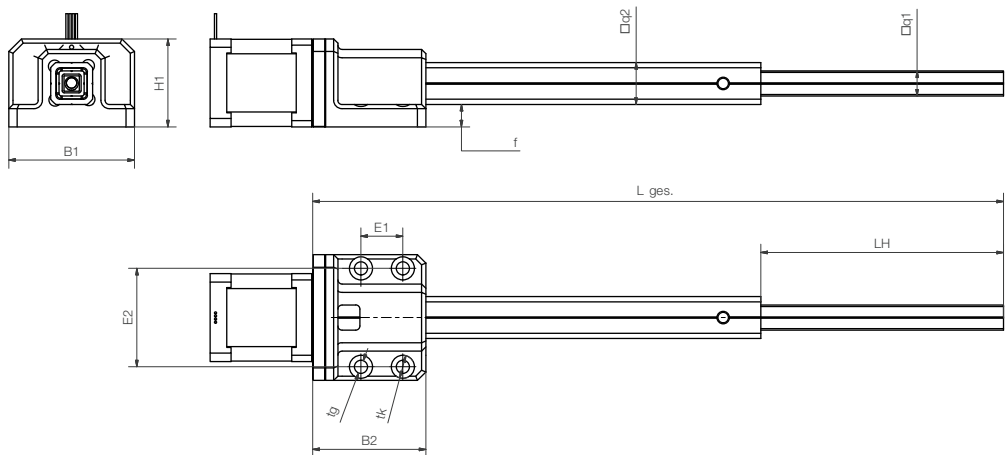
drylin® QLA linear actuator



- Extension lengths up to 300mm
- Max. compressive strength 100N
- Unsupported installation
- Accessories available (hand wheel, position indicator etc.)
- Ready-to-connect with drylin® E motor kits

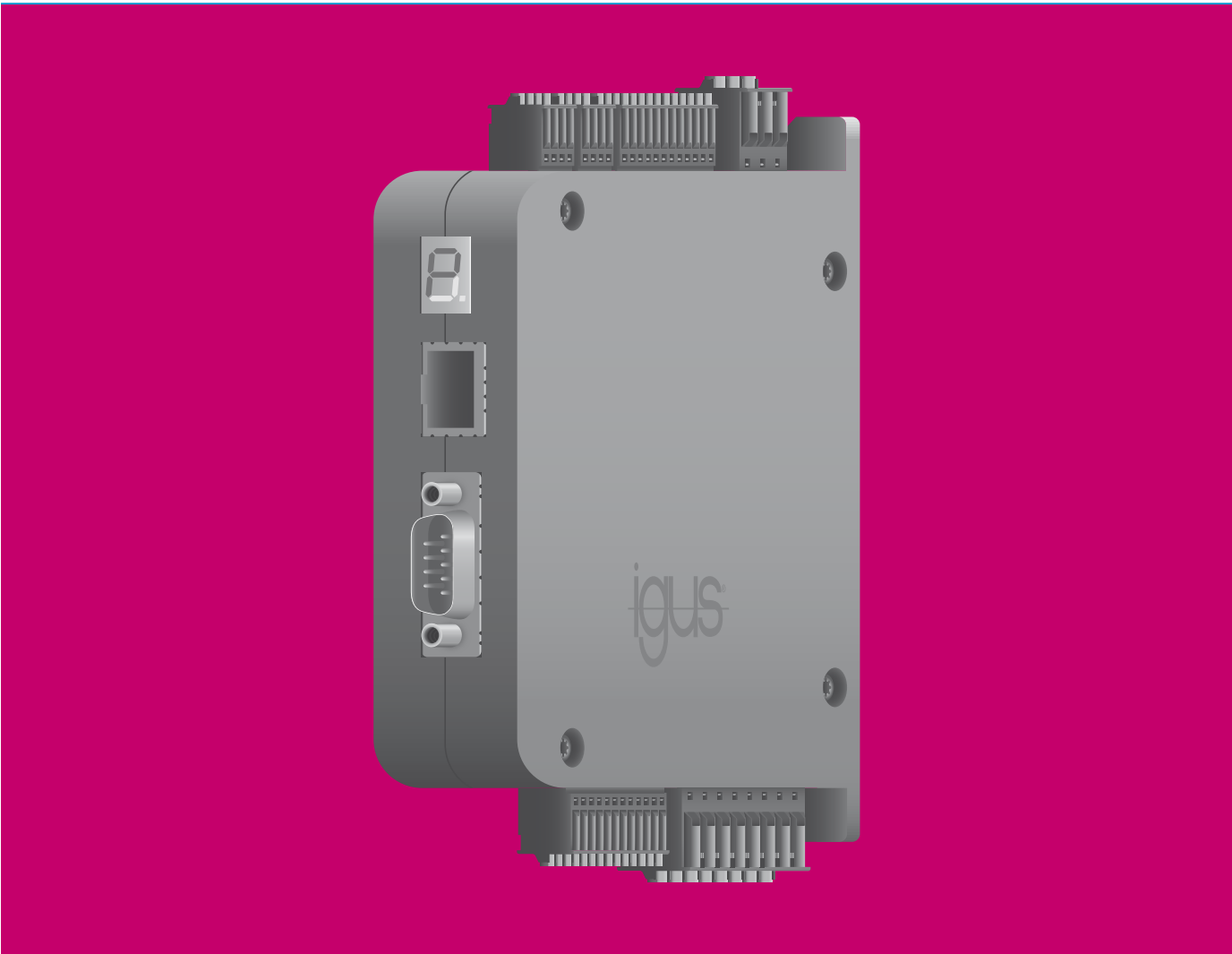
Typical application areas:

- Textile industry
- Actuators
- Windows
- Rehabilitation technologies
- Lane adjustments
- Inspection technology
- Medical and pharmaceutical technology



Dimensions [mm]

Part No.	Max. axial F [N]	LH	L total	H1	B1	B2	E1	E2	Q1	Q2	tk	tg
QLA-2012-A	100	300	B2 + 2xLH	42	60	54	20	47	12	20	11	6.5



drylin® electric drive technology

Motor control systems

For DC, EC and stepper motors

Intuitive user interface

Quick and easy set up

Compatible with many industrial control systems

For all drylin® linear axes





### D1 dryve motor control unit makes it possible to easily control linear systems

Travel distances, positions, speeds, operating times – easily defined in the new web-based control system from igus®. A simple and intuitive browser-based user interface, extensive functionality with the option of "remote control" via Ethernet (Intranet) or bus system - "dryve" is the simple motor control method from igus® for your linear guide system.

- Control via laptop, tablet or smartphone possible
- Suitable for all drylin® E axes
- For DC, EC and stepper motors
- Communication by means of CANopen, Ethernet and digital inputs and outputs
- Compatible with many industrial control systems
- Cost-effective



#### Connections and displays

- 1 Voltage supply
- 2 Digital inputs
- 3 Digital outputs
- 4 Analogue inputs
- 5 Motor & brake connection
- 6 Angular encoder
- 7 CANopen
- 8 Ethernet
- 9 Display



#### Available from stock

Detailed information about delivery time online.



#### Technical data and further options

► [www.igus.eu/dryve](http://www.igus.eu/dryve)

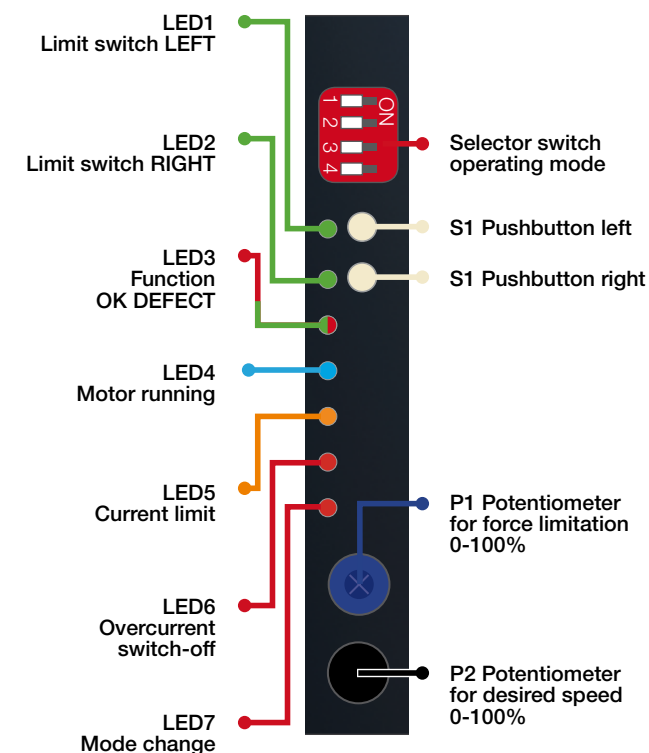


### D3 dryve motor control unit makes it possible to easily control linear systems

The D3 dryve is a cost-effective control unit for direct-current motors and is ready to use immediately. It can be connected quickly and is very easy to use - without any additional connection work. Buttons and rotary controls on the housing make it possible to control linear carriages without a PC, laptop or tablet. Different speeds as well as starting modes can be set.

- Easy to use, quick to connect
- Controls on the device make it possible to directly control linear carriages, for example (anticlockwise/clockwise operation, speed, step mode or continuous operation)
- Different speeds and starting modes possible
- Can be combined with switches or joysticks
- Cost-effective, everything necessary and immediately ready for use for e.g. control on a camera slider

#### D3 dryve motor control system for all igus® DC motors



#### Available from stock

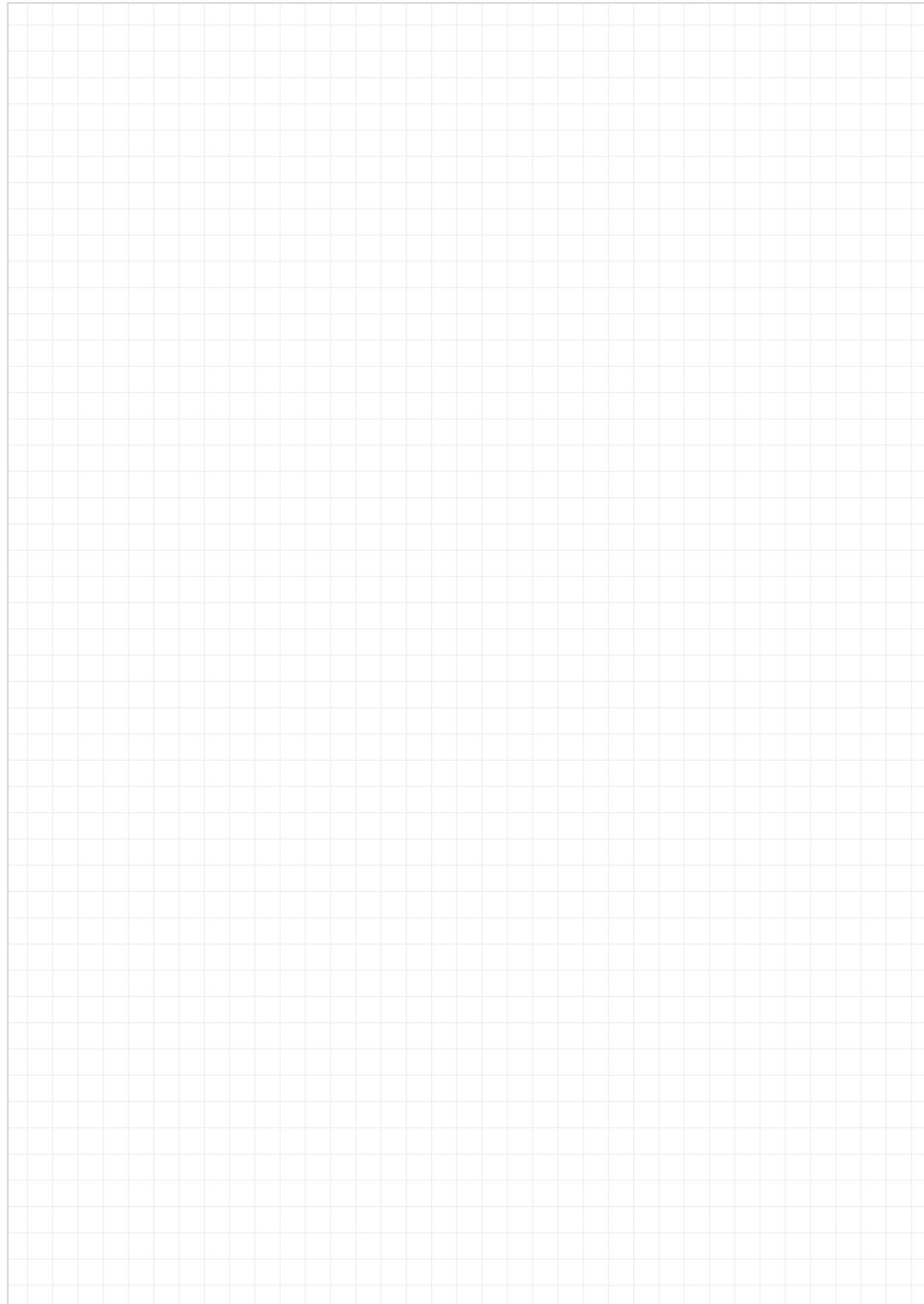
Detailed information about delivery time online.



#### Technical data and further options

► [www.igus.eu/D3](http://www.igus.eu/D3)





## drylin® general drive technology – Accessories

Accessories for manual positioning and format  
adjustment

Stepper and DC motors for electrical drive

Couplings and motor flanges

Cables and proximity switches

Assembly and fastening options



## Accessories for drylin® drive technology – manual positioning

An extensive range of accessories is available for many drylin® drive units to perform manual adjustments quickly and conveniently. When directly configuring the linear unit with the order, the units are shipped completely assembled. Any subsequent reconfiguration may result in the lead screw having to be exchanged because the lead screw ends may be too short.

- Fast and precise positioning
- Ergonomic operation
- Provides a mechanical brake



### Available from stock

Detailed information about delivery time online.



### Price breaks online

No minimum order value. No minimum order quantity.

Many options of hand wheels

Positional indicators for different pitches and directions

A lead screw clamp secures the lead screw

Angular drives for continuously adjustable operation



### Angular drive

- 360° continuously adjustable
- Fixing of setting angle with clamp
- Small flange saves installation space

► Page 1422



### Position indicator

- Direct read-out of the carriage position for the lead screw drive
- Bore reducers included to enable fitting to the entire product

► Page 1424



### Lead screw clamp

- For clamping of the lead screw
- Provides a mechanical brake to the lead screw
- Material: Plastic housing with aluminium shaft clamp

► Page 1425



### Adapter plate

- Position indicator and/or lead screw clamp
- Suitable for linear modules of SHT/SLW/SHTP series
- Material: plastic igumid G

► Page 1450



### Hand wheels

- Rotary knob: Defined standard for complete units
- Different outer diameters available
- Different handles available

► Page 1426



### Flexshaft incl. remote control unit

- Optional offset operation of the drylin® linear modules
- Controls can be positioned independently
- Available in length 300, 500 and 1,000mm
- Can be combined with other accessories

► Page 1428

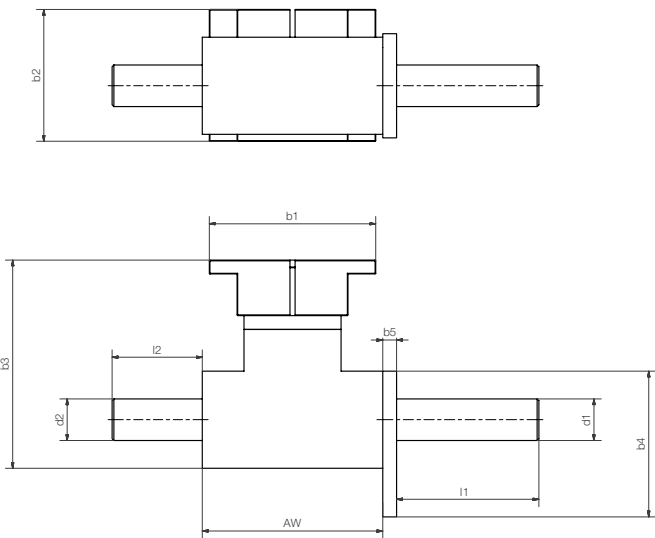
# drylin® drive technology | Accessories | Product range

## Angular drives - flexible and adjustable

In addition to safety technology aspects, limited operating space requires drylin® drives to be operated with flexibility and ease. We provide a product range of continuously adjustable angular drives for adjustment options from a defined direction. For manual adjustments, the angular drives can also be configured with position indicator, clamp and hand wheel, and are shipped pre-assembled. Angular drives with keyed/grooved shafts are available for motor interfaces with increased torque transfers.



- Double-side shaft output for angular drives WT-3 and WT-4
- For rotary transmissions of 90°
- Configuration with lead screw clamping/position indicator/hand wheel possible
- Position indicator, lead screw clamp and hand wheel available ► **Page 1424**



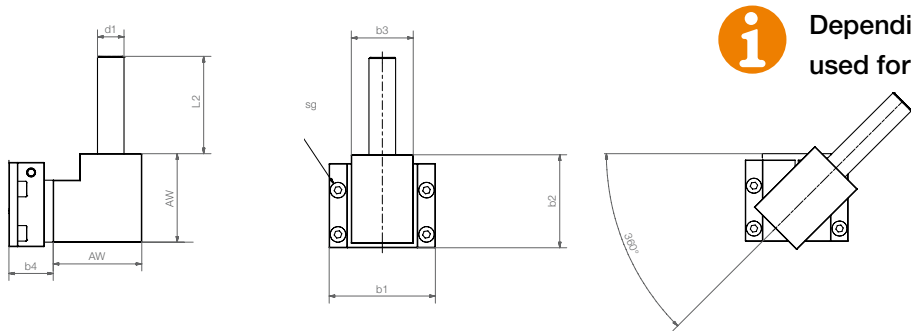
### Dimensions [mm]

Part No.	M max. [N]	<sup>105)</sup>	AW	d1	d2	l1	l2	b1	b2	b3	b4	b5
WT-3000-T	3	01:01	52	12	12	26 / 41 / 59 / 74	26	48	38	60	42	4
WT-4000-T	6	01:01	60	14	14	26 / 47 / 65 / 80	26	56	46	83	50	10

<sup>105)</sup> Gear ratio



- Flexible adjusting to your installation with continuously variable adjustment (can be oscillated 360°)
- Max. drive torque 3Nm
- Clamping using set screw
- Ø 12mm h7 output shaft



**i** Depending on the design, an adapter plate is used for connection to the linear system

### Dimensions [mm]

Part No.	<sup>105)</sup>	AW	b1	b2	b3	b4	L2	d1	sg
WT-3000   3100   3500	1:1	40	48	42	28	20	26	12	M4
WT-3600   3700	1:1	40	48	42	28	30	26	12	M4

<sup>105)</sup> Gear ratio

# drylin® drive technology | Accessories | Product range

## Angular drives for heavy duty and hygienic design



- drylin® angular drives provide for a maximum of positioning flexibility. The form fitting connection can give a maximum torque of up to 6Nm.
- Flexible adjusting to your installation with continuously variable adjustment (can be oscillated 360°)
  - Max. drive torque 6Nm through coupling
  - Fixed using feather key groove
  - Input shaft Ø 14mm h7 with size
  - Compatible with drylin® SHT/SHTC/SLW (sizes 16, 20 and 30)
  - Position indicator, lead screw clamp and hand wheel available ► **Page 1424**

### Dimensions [mm]

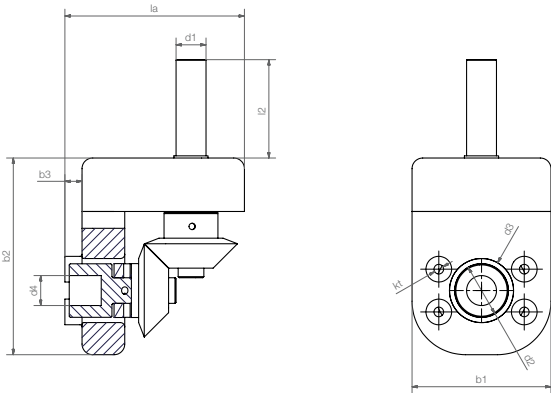
Part No.	<sup>105)</sup>	AW	b1	b2	b3	b4	L2	d1	sg
WT-4000   4100   4200   4700	1:1	60	52	51	40	23	26	14	M4
WT-4600	1:1	60	52	51	40	33	26	14	M4

<sup>105)</sup> Gear ratio



Angular drive with hand wheel (optional)

- Following the idea of "Hygienic Design" the angular drive is available as maintenance-free and washable stainless steel/polymer system.
- Max. drive torque 3Nm
  - Single parts made of stainless steel
  - Easy to clean/rinse with water
  - Compatible with drylin® SHTC-20-EWM-HYD ► **Page 1301**
  - Position indicator, lead screw clamp and hand wheel available ► **Page 1424**



### Dimension [mm]

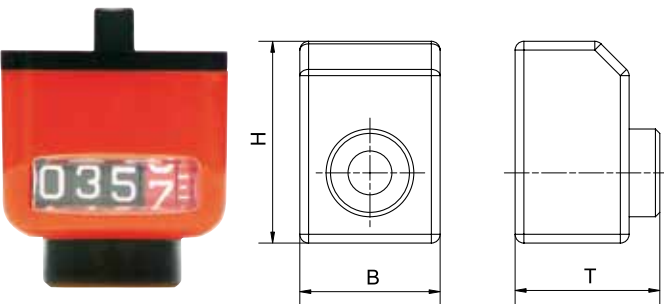
Part No.	<sup>105)</sup>	la	kt	b1	b2	b3	d4	l2	d1	d2	d3	sg
WT-1100	1:1	84	4.5	65	92	8	12	26	14	25	30	M4

<sup>105)</sup> Gear ratio



Position indicator – safe reproducibility

To keep downtime to a minimum and make adjustments quickly and precisely, the indicator is used to create repeatable values. These can be shipped from stock for almost any linear unit in the matching pitch, in the required counting and viewing direction and in a variety of colours.



- Plastic analogue indicator for adjustment and direct reading of carriage position
- 3- (P1), 4- (P3) or 5- (P6) digit counter (red digit indicates tenths)
- Can be combined with manual clamps and hand wheels
- Reduction sleeves included
- Suitable adapter plate available ► **Page 1450**

Installation options



0 degrees    90 degrees    180 degrees    270 degrees

Display orientation



**A**  
Standard



**B (optional)**  
for vertical fitting position:  
display turned 180°

Technical data [mm]

Position indicator	Digits	Decimal places	ID hollow shaft ø	Reduction sleeves ø
SHT-P1	3	1	8	6 + 6.35
SHT-P3	4	1	14	10 + 12.00
SHT-P6	5	1	20	14 + 16.00

Dimensions [mm]

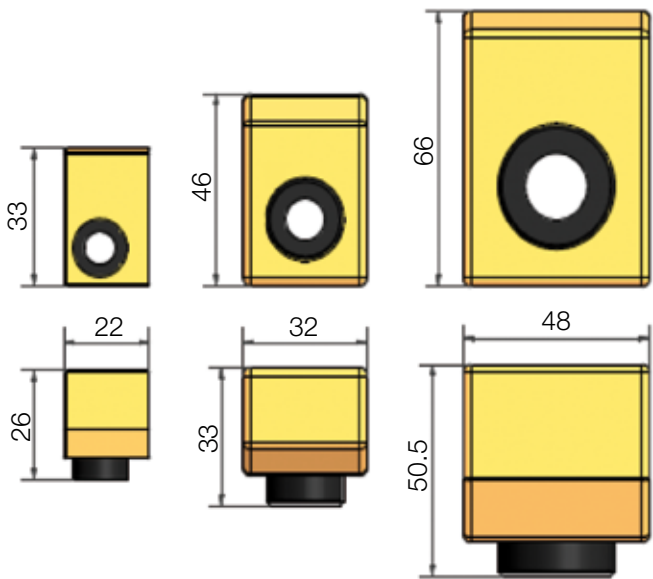
Position indicator	H	B	T
SHT-P1	33	22	26.0
SHT-P3	46	32	33.0
SHT-P6	66	48	50.5



Order key

SHT-P3-A-1.50-1-DX-O-F-ES

- Material**  
**ES:** Hollow stainless steel shaft made from (optional)
- Housing colour**  
**O:** Orange
- Counting direction**  
**DX:** clockwise  
**SX:** anti-clockwise
- Decimal places**  
**1:** One decimal place (red digit)  
**0:** No decimal place (red digit)
- Lead**  
**< 10.00:** One decimal place  
**> 10.00:** No decimal place
- Display orientation**  
**A:** Display orientation 0°  
**B:** Display orientation 180° (optional)
- Installation size**



**P1**  
SLW-0630  
SHTP-01-06

**P3**  
all other  
linear systems

**P6**  
SHTC-40  
SHTC-50

Lead screw clamp

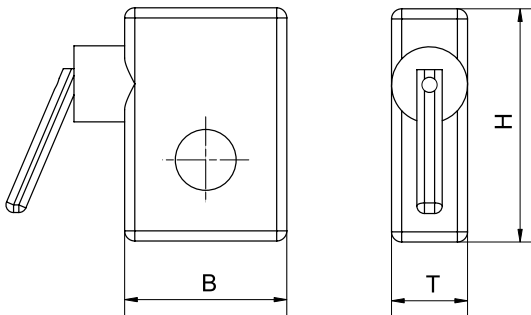
Linear modules with trapezoidal threads are equipped with a self-locking mechanism. Many applications call for an additional clamping option as an additional safeguard against unintentional movement.



- Shaft clamping flange for attachment to the position indicator and subsequent mounting on the lead screw
- Provides a mechanical brake to the lead screw
- Material: plastic housing with aluminium shaft clamp
- Reduction sleeves for further diameters available

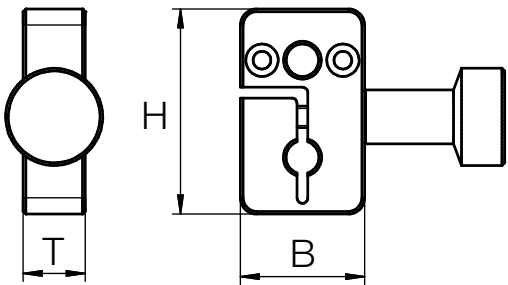


Assembly and positioning with adapter plate  
► **Page 1450**



Dimensions [mm]

Part No.	SHT-HK-12	SHT-HK-16	SHT-HK-20	SHT-HK-30
Lead screw size	10	14	12	14
Dimensions (B x H x T)	32 x 46 x 15	32 x 46 x 15	32 x 46 x 15	32 x 46 x 15



Dimensions [mm]

Part No.	SHT-HK-06	SHT-HK-06,35	SHT-HK-08
Lead screw size	6	6.35	8
Dimensions (B x H x T)	23 x 38 x 11.5	23 x 38 x 11.5	23 x 38 x 11.5

drylin® drive technology | Accessories | Product range

Hand wheels for drylin® linear modules

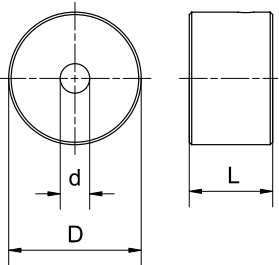
We have an extensive selection of hand wheels available to ship from stock for the most varied requirements. These range from small compact sizes up to ø125 with/without handle, and in various configurations.



Standard

With handle  
(optional)

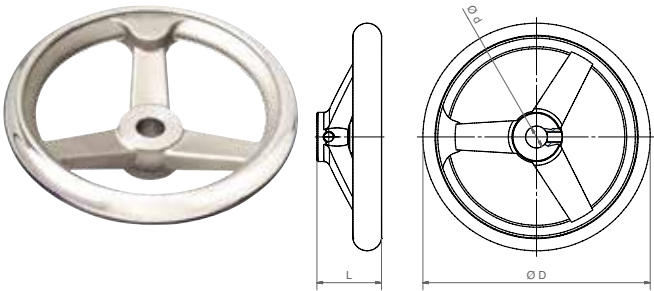
- Rotary knob: Defined standard for complete units
- Different outer diameters available
- Different handles available



Dimensions [mm]

d	D	L	OG	FG	UG	SG <sup>104)</sup>
4	22	15	●			
5	22	15	●			
8	27	17	●	–	–	–
10	27	17	●	–	–	–
12	42	23	●	–	–	–
14	42	23	●	–	–	–
6	50	52	–	●	–	–
8	80	75	–	●	●	●

<sup>104)</sup> The automatic panning will return on release



Dimensions [mm]

Part No.	d	D	L	OG	Weight [g]
SHT-HR-12-125-36-OG-ES	12	125	36	●	625



Order key

SHT-HR-8-27-17-OG



- Handle (optional)
- OG: Without handle
- FG: Fixed handle
- UG: Folding handle
- SG: Security handle
- Length
- Outer diameter
- Inner diameter
- Hand wheel
- Standard

d	D	L	OG	FG	UG	SG <sup>104)</sup>
10	80	75	–	●	●	●
12	80	75	–	●	●	●
12	125	109	–	●	●	●
14	125	109	–	●	●	●
16	125	109	–	●	●	●
20	198	141	–	●	–	–

Stainless steel hand wheel

- Designed for application in food and pharmaceutical industries
- Corrosion-free stainless steel

drylin® drive technology | Accessories | Product range

Flexshaft – separately located control of linear modules

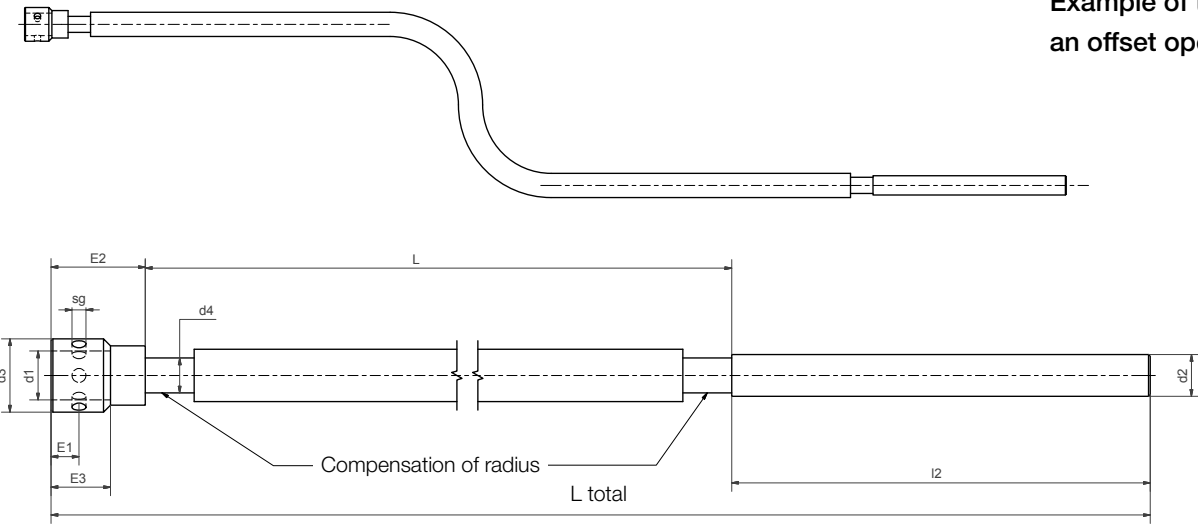


The ideal complement to drylin® linear modules. The flexshaft enables the positioning of the hand wheel independent of the installation position of the linear unit. Distance up to 500mm and offset by 85°.

- Lengths: 300mm, 500mm und 1,000mm (flexible area)
- Flexible shaft: burnished steel
- Plastic coated : Rilsan
- Connection piece: Stainless steel AISI 303
- For all journal diameters (10, 12 and 14mm)
- Flexible installation
- Space-saving
- Can be combined with a lead screw support block ▶ **Page 1268**
- Position indicator, lead screw clamp and hand wheel available ▶ **Page 1424**



Example of the function of an offset operating unit



Dimensions [mm]

Part No.	d1	d2	d3	d4	l2	sg	E1	E2	E3	L	L total	L max.	T max. [Nm]	Min. bend radius
FS-06-500-Z12X120-AA	14h7	12h7	21	6	120	M4	8.5	36.5	14.5	500	657	1,000	3	70
FS-08-1000-Z12X120-AA	14h7	12h7	21	8	120	M4	8.5	36.5	14.5	1,000	1,157	1,000	4.5	90



More dimensions upon request

# drylin® E | Linear axes with motor | SHT-ROU

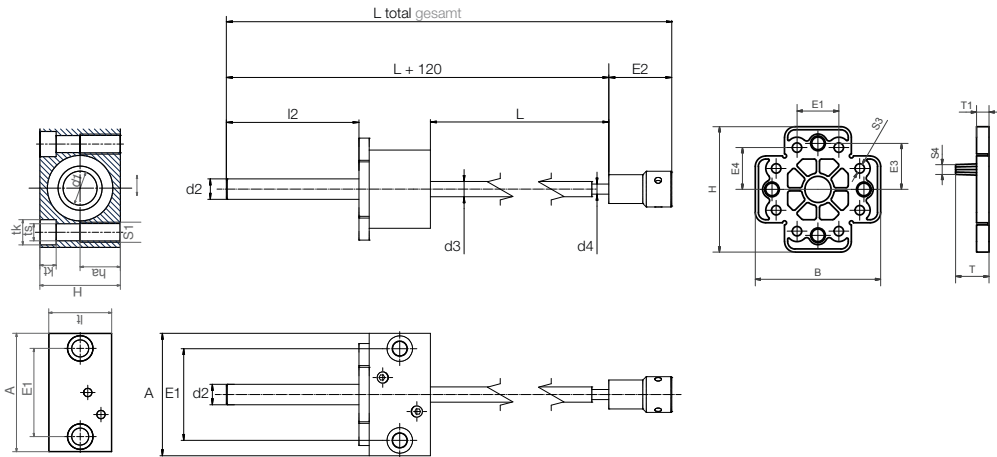
With the drylin® Remote Operation Unit ROU, linear modules can be controlled remotely

With the Remote Operation Unit, hazards such as chemicals or heat can be avoided. Thanks to the flexshaft, they can also be easily manipulated.

- Use e.g. of chemicals, heat, places that are hazardous for people working in them
- Enables manual remote control of linear modules
- Ergonomic operation via flexshaft
- Safe control of linear modules outside the work area
- Available with flexshaft with Ø 6 and 8mm in different lengths
- Thanks to the adapter plate, position indicators as well as lead screw clamps can be fitted in 4 operating directions (0°, 90°, 180°, 270°)
- Reduction sleeves for quick and simple connection to lead screw size ø8/10/12 available AK-0047 (ø14->8mm); AK-0048 (ø14->10mm), AK-0049 (ø 14->12mm)

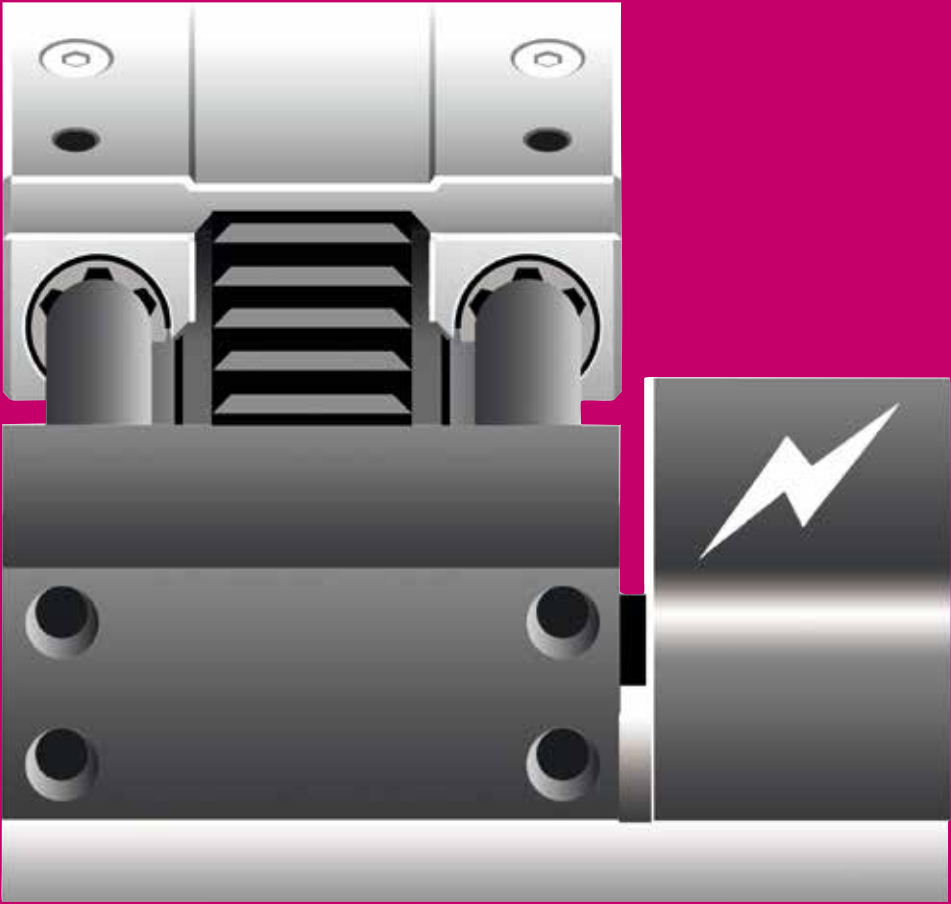
Typical application areas:

- Format adjustment
- Cabin construction
- Hazard areas



Dimensions [mm]

Part No.	L	L	L2	d2	d3	d4	E1	E2	E3	E4	S3	H	B	T1	A	E5	It	tk	ts	kt	ha	S1
		Total																				
SHT-ROU-06-300	300	457	78	12	9	6	20	37	22	20	4.5	60	60	6	72	54	36	15	9	8.6	23	M10
SHT-ROU-06-500	500	657	78	12	9	6	20	37	22	20	4.5	60	60	6	72	54	36	15	9	8.6	23	M11
SHT-ROU-08-500	500	657	78	12	11	8	20	37	22	20	4.5	60	60	6	72	54	36	15	9	8.6	23	M12
SHT-ROU-08-1000	1,000	1157	78	12	11	8	20	37	22	20	4.5	60	60	6	72	54	36	15	9	8.6	23	M13



## drylin® electric drive technology – accessories

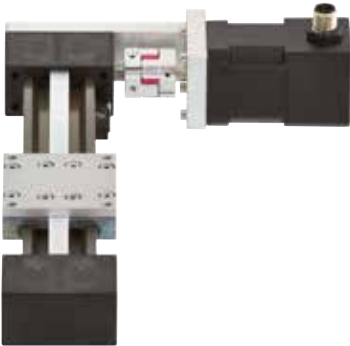
Stepper motors

DC motors

Motor flanges

Cables and proximity switches

Mounting accessories





## Accessories for drylin® E linear axes

Almost every drylin® linear axis can be retrofitted with a corresponding motor and accessories such as initiators (proximity switches). igus® offers a large modular system of motors, matching couplings and motor flanges plus many practical components for the combination of linear axes as well as fastening material.

- Connection of stepper motors and DC motors
- Linear robot structures
- Fastening options

chainflex® motor and encoder cables

drylin® E stepper and DC motors

Motor flange made of aluminium

Couplings for motor and shaft connection

Adapter plates for linear robot structures



**Available from stock**

Detailed information about delivery time online.



### Stepper motors

- Powerful in 5 installation sizes
- Motors with connector or stranded wire
- With encoder and brake
- Increased torque resistance due to machined flat motor shaft (D-cut)

► Page 1432



### DC motors

- 3 sizes
- Torque from 0.1-1.8Nm
- Up to 440rpm
- Increased torque resistance due to machined flat motor shaft (D-cut)

► Page 1436



### Motor flanges

- Motor connection for drylin® linear axes
- For stepper and DC motors
- Suitable for igus® couplings

► Page 1441



### Cables and proximity switches

- chainflex® connection cables with straight or angled connectors
- Proximity switches: Limit and reference switches
- For drylin® linear modules and toothed belt axes

► Page 1442



### Mounting accessories

- Adapter plates for linear robot structures
- Spacer for height adjustment of SHT/SLW linear modules
- Mounting material

► Page 1444

# drylin® E | Stepper motors | Product overview

## Various NEMA stepper motor options



### Motor with stranded wires

Motors with stranded wires are the least expensive and the most common stepper motors. The connecting wires (length 30cm) for this type exit from the housing and will be configured with a JST connector. They are usually installed in machines and equipment that have an additional housing or are used in clean environments.



### Motor with connector and encoder

The encoder (for increased machine reliability) sends signals from the motor to the motor control. The encoder verifies that the required linear motion has occurred precisely.

**i** All motors are delivered with a machined flat motor shaft (D-cut) for increased torque resistance.

## Installation sizes of NEMA stepper motors

### NEMA11: Tiny but with plenty of power

This motor has very compact dimensions. Even so, heavy loads can be moved with the suitable lead screw pitch. This motor is typically used on small test and analysis equipment and miniature adjustments.

### NEMA17: Small, but lots of power

This little motor has impressive torque and high RPMs. Reliable operation at fast travel with low loads.

### NEMA23: The best known stepper motor size

Versatile choice due to the high torque and rotational speed. This motor is the best choice for most applications with medium loads.



### Motor with connector

The connector interface provides a high IP65 protection level (IP: International Protection). The higher the IP rating, the better the motor is protected from the ingress of dirt and water.



### Motor with connector, encoder and brake

The brake can hold the payload in position when the motor is not under power. This is used as a safety feature during power failures – recommended for vertically mounted systems.

### NEMA23XL: The power motor in the medium installation size

A development extension of the typical NEMA23 with nearly twice the torque. The assembly dimensions are identical to the NEMA23, allowing many applications.

### NEMA34: The power pack in the large installation size

Applications with higher loads are implemented using the largest installation size. Heavy-duty format adjustments or parallel dual axis setups are among its primary duties.

# drylin® E | Stepper motors | Technical data

## Technical data

Distance over hubs		28	42	56	60	86
Motor		NEMA11	NEMA17	NEMA23	NEMA23XL	NEMA34
Connection dimensions	[mm]	28 x 28	42 x 42	56 x 56	60 x 60	86 x 86
Maximum voltage	[VDC]	60	60	60	60	60
Nominal voltage	[VDC]	24-48	24-48	24-48	24-48	24-48
Nominal current	[A]	1.0	1.8	4.2	4.2	6.4
Holding torque	[Nm]	0.13	0.5	2.0	3.5	5.9
Ratchet torque	[Nm]	0.004	0.022	0.068	0.075	0.210
Step angle	[°]	1.8	1.8	1.8	1.8	1.8
Resistance/phase	[Ω]	2.30 ±10%	1.75 ±10%	0.5 ±10%	0.65 ±10%	0.33 ±10%
Inductivity/phase	[mH]	1.40 ±20%	3.30 ±20%	1.90 ±20%	3.20 ±20%	3.00 ±20%
Moment of inertia - rotor	[kgcm²]	0.02	0.08	0.48	0.84	2.70
Shaft load, axial	[N]	7	7	15	15	65
Shaft load, radial	[N]	20	20	52	63	200

Encoder		
Operating voltage	[VDC]	5
Signals/rotation	[1/min]	500
Zero signal/index		yes
Line driver		RS422 Protocol
Signal shape (Clockwise motor rotation)	[CW]	<div><div>A</div><div>A/</div><div>B</div><div>B/</div><div>N</div><div>N/</div></div>

## Technical data

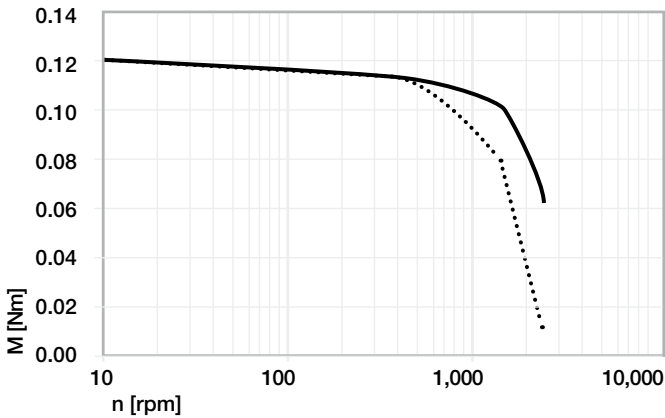
Plate size brake		28	42	56	60	86
		NEMA11	NEMA17	NEMA23	NEMA23XL	NEMA34
Operating voltage	[VDC]	–	24 ±10%	24 ±10%	24 ±10%	24 ±10%
Output rating	[W]	–	8	10	10	11
Holding torque	[Nm]	–	0.4	1.0	1.0	2.0
Mass moment of inertia	[kgcm²]	–	0.01	0.02	0.02	0.07

Mass moment of inertia		28	42	56	60	86
		NEMA11	NEMA17	NEMA23	NEMA23XL	NEMA34
Product weight	[kg]	0.25	0.32	1.12	1.56	3.20
With encoder	[kg]	0.27	0.34	1.14	1.58	3.30
With encoder and brake	[kg]	–	0.58	1.36	1.82	3.60

Operating data		
Ambient temperature	[°C]	–10 to +50
Max. allowable temperature increase	[°C]	80
Insulation class		B
Air humidity (non condensing)	[%]	85
IP rating - motor housing		IP65 (shaft seal IP52, motor with stranded wires IP40)
CE conformity		EMC directive

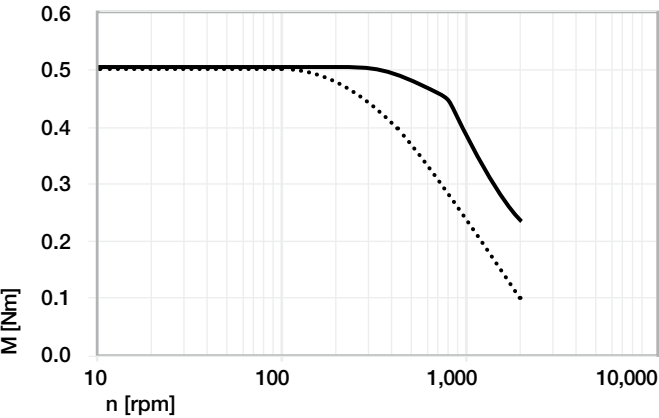
Flange size 28 (NEMA11)

MOT-AN-S-060-001-028-...



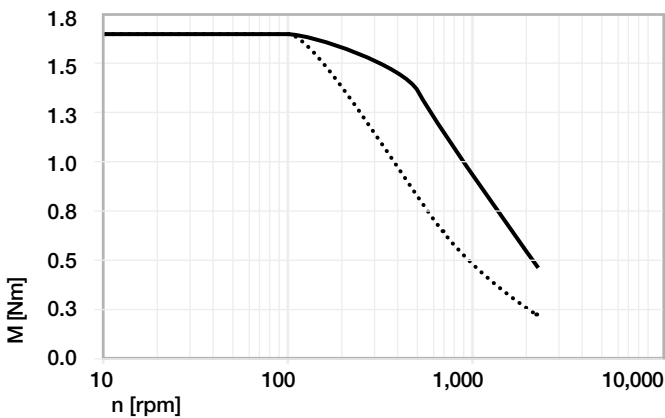
Flange size 42 (NEMA17)

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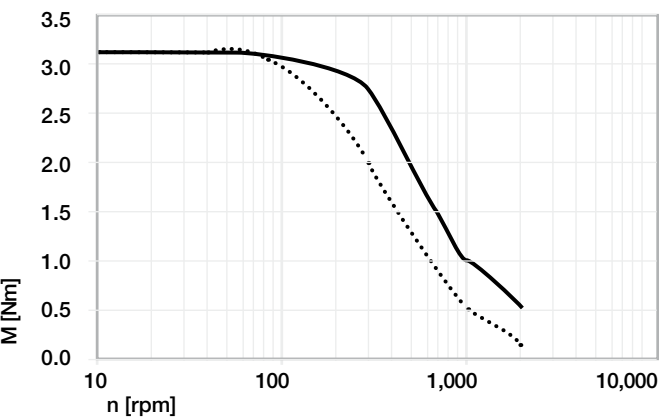
Flange size 56 (NEMA23)

MOT-AN-S-060-020-056-...



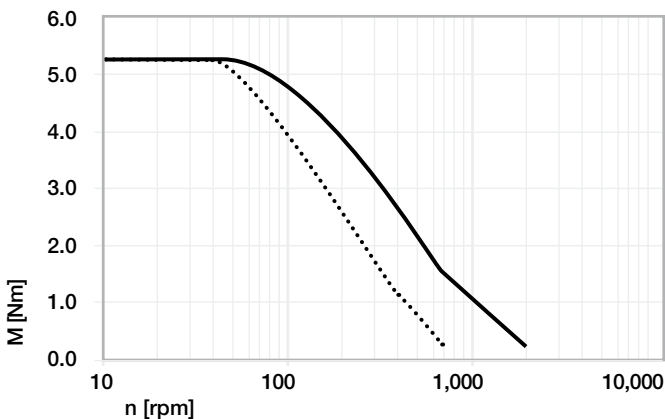
Flange size 60 (NEMA23XL)

MOT-AN-S-060-035-060-...



Flange size 86 (NEMA34)

MOT-AN-S-060-059-086-...



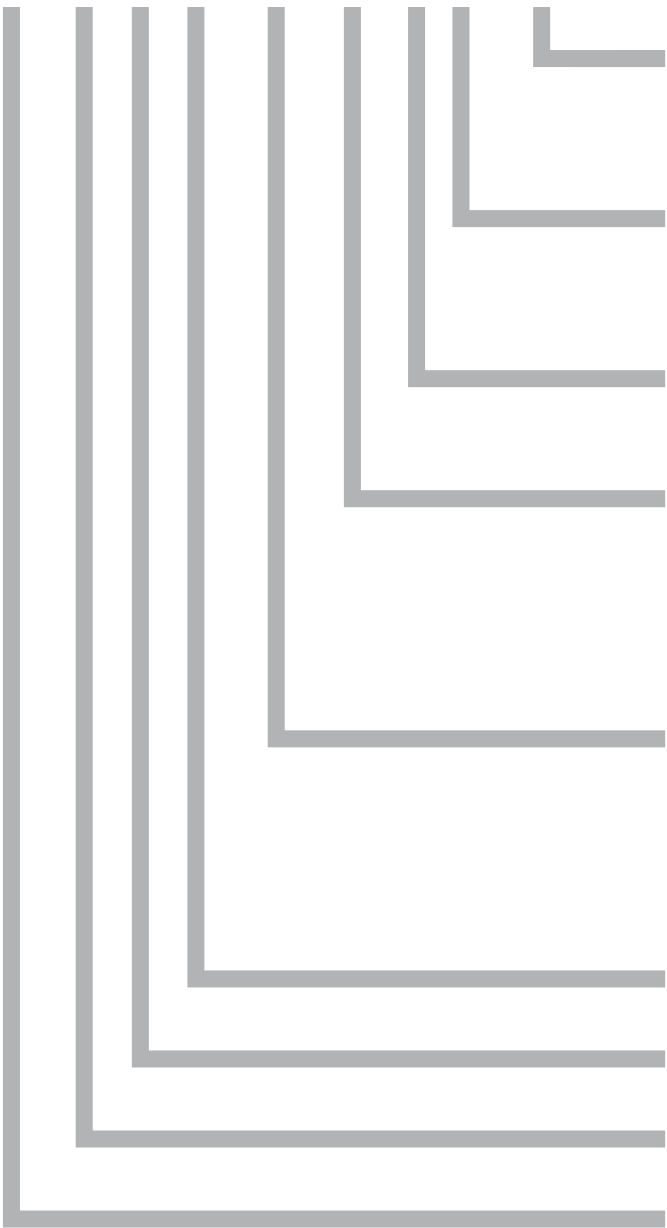
----- 24VDC      ——— 48VDC

The characteristic curves are determined in quarter step mode



Order key

MOT-AN-S-060-020-056-M-A-AAAA



Specification

AAAA: Standard

AAAC: Encoder

AAAD: Encoder & brake

Options

A: Without

C: Incremental encoder

D: Incremental encoder & brake

Motor connection

M: Metric connector

L: Stranded wires

Distance over hubs

028: 28mm (NEMA11)

042: 42mm (NEMA17)

056: 56mm (NEMA23)

060: 60mm (NEMA23XL)

086: 86mm (NEMA34)

Holding torque

001: 0.1Nm

005: 0.5Nm

020: 2.0Nm

035: 3.5Nm

059: 5.9Nm

Maximum voltage

060: 60V/DC

Motor type

S: Stepper motor

Type

AN: Design

Product type

MOT: Motor



More information ► [www.igus.eu/drylinE](http://www.igus.eu/drylinE)



# drylin® E | DC motors | Product range

## DC motors with spur gear



This small DC motor can be powered directly from a power source, such as a battery. It reverses direction by changing the polarity. Typical applications are sensor/camera travel and light-duty format adjustments with drylin® lead screw or toothed belt axes.

- Torque [Nm] from 0.1Nm to 1.5Nm
- Up to 440rpm
- Can be operated at 12 & 24VDC

- 1 MOT-AE-B-024-001-037-F-A-AAAA
- 2 MOT-AE-B-024-003-037-F-A-AAAA
- 3 MOT-AE-B-024-005-036-F-A-AAAA
- 4 MOT-AE-B-024-007-037-F-A-AAAA
- 5 MOT-AE-B-024-010-042-F-A-AAAA
- 6 MOT-AE-B-024-015-037-F-A-AAAA
- 7 MOT-AE-B-024-018-042-F-A-AAAA

### Technical data

Motor		1	2	3	4	5	6	7
Maximum voltage	[VDC]	24	24	24	24	24	24	24
Nominal voltage	[VDC]	24	24	24	24	24	24	24
Nominal current	[A]	0.5	0.5	0.9	0.5	2.3	0.5	2.0
Nominal torque	[Nm]	0.1	0.3	0.5	0.7	1.0	1.5	1.8
Start up torque	[Nm]	0.3	0.5	1.0	1.0	3.0	1.8	6.0
Idling speed	[1/min]	440	146	223	58	290	22	115
Rated speed	[1/min]	350	112	190	47	252	17	101
Shaft load, axial	[N]	6.8	6.8	25	6.8	30	6.8	30
Shaft load, radial	[N]	9.8	9.8	30	9.8	50	9.8	50
Reduction gearing	[N]	10	30	27	75	24	200	61

Product weight								
MOT-AE	[kg]	0.207	0.213	0.450	0.221	0.650	0.270	0.690
MOT-DC	[kg]	0.280	0.280	0.420	0.280	0.580	0.280	0.580

Operating data		MOT-AE   MOT-DC						
Ambient temperature	[°C]	-10 to +60   -10 to +50						
Max. allowable temperature increase	[°C]	60						
Air humidity (non condensing)	[%]	85						
IP rating - motor housing		IP30 IP41	IP30 IP41	IP20 IP41	IP30 IP41	IP20 IP41	IP30 IP41	IP20 IP41
Operating mode		S2 (short-term operation)						

Motor connection low-profile connector								
Length	[mm]	6.5	6.5	6.0	6.5	9.0	6.5	9.0
Width	[mm]	4.0	4.0	3.8	4.0	4.8	4.0	4.8
Strength	[mm]	0.4	0.4	0.5	0.4	0.5	0.4	0.5
Can be combined with motor flange		-	-	-	-	MF-1040	-	MF-1040

# drylin® E | DC motors | Product range

## DC motors with spur gear and "protect" protection housing

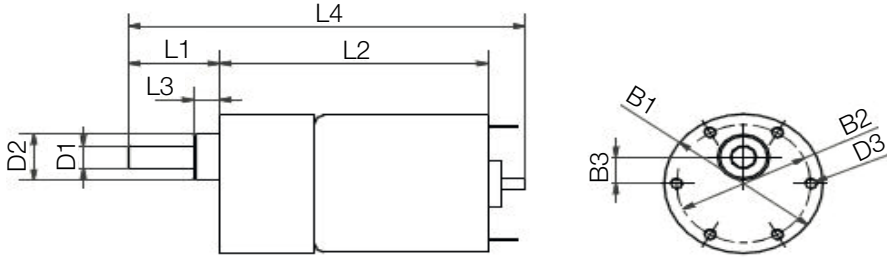


Users benefit from protected DC motors in two ways. A motor housing prevents the ingress of particles of any kind. At the same time, the housing contains the appropriate motor connector for easy connection, with protection against occasional contact with water.

- Delivered ready to install with DC motor
- Increased operation reliability
- Quick connection with M12 connector
- For all drylin® E linear axes

- 1 MOT-DC-37-M-A-A
- 2 MOT-DC-37-M-A-B
- 3 MOT-DC-36-M-A-D
- 4 MOT-DC-37-M-A-D
- 5 MOT-DC-42-M-A-D
- 6 MOT-DC-37-M-A-H
- 7 MOT-DC-42-M-A-F

Technical data ► Page 1438

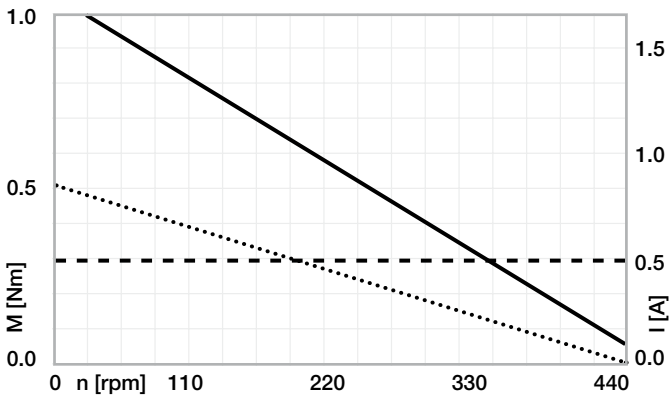


### Dimensions [mm]

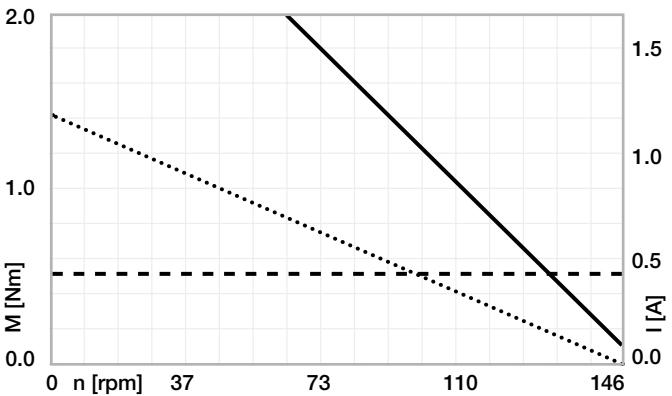
Part No.	B1 ±0.3	B2 ±0.2	B3 ±0.1	D1 -0.013	D2 ±0.025	D3 Ø	L1 ±1	L2 ±1	L3	L4
MOT-AE-B-024-001-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	59.5	6.0	92.5
MOT-AE-B-024-003-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	62.0	6.0	95.0
MOT-AE-B-024-005-036-F-A-AAAA	36.0	26.0	6.0	6.0	20.0	M3	19.3	85.6	3.0	104.9
MOT-AE-B-024-007-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	64.5	6.0	97.5
MOT-AE-B-024-010-042-F-A-AAAA	42.4	35.0	0	8.0	25.0	M4	22.0	105.2	2.0	127.2
MOT-AE-B-024-015-037-F-A-AAAA	37.0	31.0	7.0	6.0	12.0	M3	21.0	67.0	6.0	100.0
MOT-AE-B-024-018-042-F-A-AAAA	42.4	35.0	0	8.0	25.0	M4	22.0	111.9	2.0	142.4
MOT-DC-37-M-A-A	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-37-M-A-B	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-36-M-A-D	41.0	26.0	0	6.0	20.0	M3	19.3	126.0	3.0	158.3
MOT-DC-37-M-A-D	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-42-M-A-D	47.3	35.0	0	8.0	25.0	M4	22.0	146.0	2.0	181.0
MOT-DC-37-M-A-H	42.0	31.0	7.0	6.0	12.0	M3	21.0	100.0	6.0	134.0
MOT-DC-42-M-A-F	47.3	35.0	0	8.0	25.0	M4	22.0	146.0	2.0	181.0

Characteristic curves 24VDC

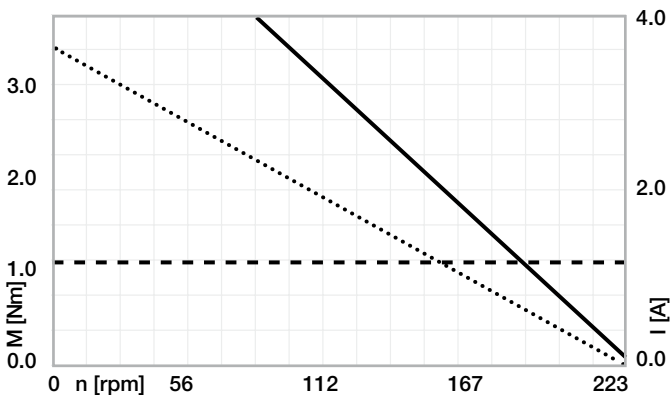
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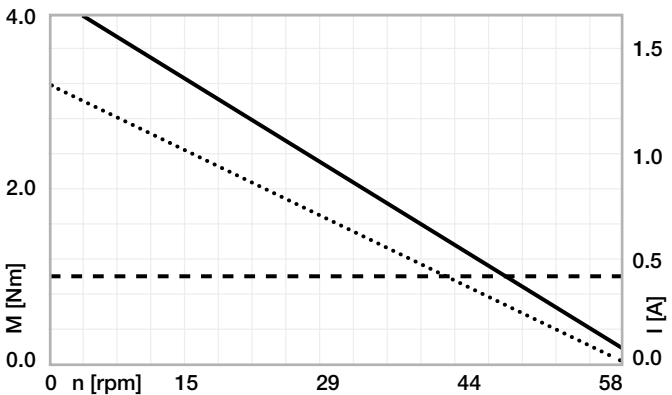
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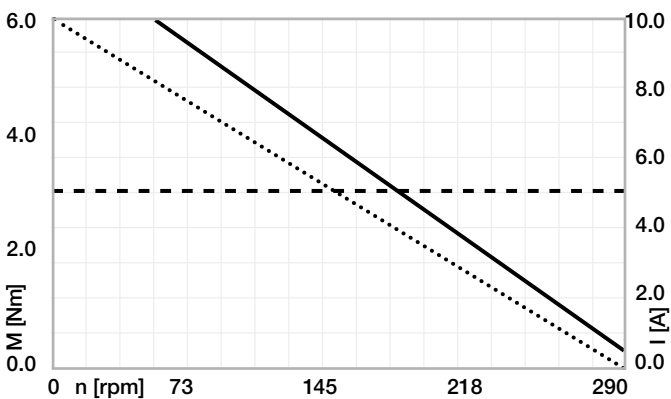
MOT-AE-B-024-005-036-F-A-AAAA / MOT-DC-36-M-A-D



MOT-AE-B-024-007-037-F-A-AAAA / MOT-DC-37-M-A-D



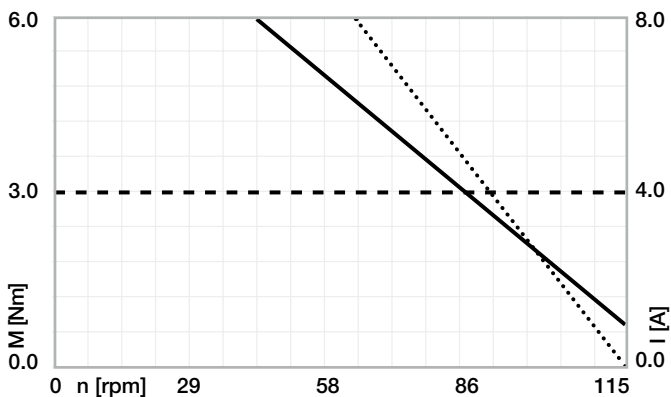
MOT-AE-B-024-010-042-F-A-AAAA / MOT-DC-42-M-A-D



MOT-AE-B-024-015-037-F-A-AAAA / MOT-DC-37-M-A-H



MOT-AE-B-024-018-042-F-A-AAAA / MOT-DC-42-M-A-F



Order key

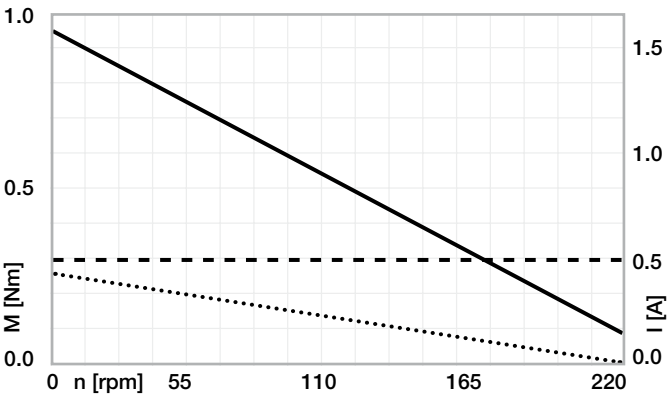
MOT-AE-B-024-015-037-F-A-AAAA

Product type: Motor
AE: Design
Motor type B: DC motor
Operating voltage: 24VDC
Nominal torque [Nm]
Outer diameter [mm]
F = Low-profile connector
Options: A: Without
AAAA: Standard

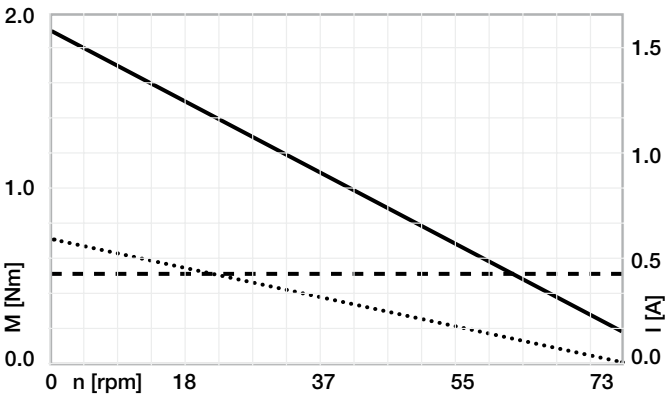
----- Torque      ----- Max. continuous torque      — Motor current

Characteristic curves 12VDC

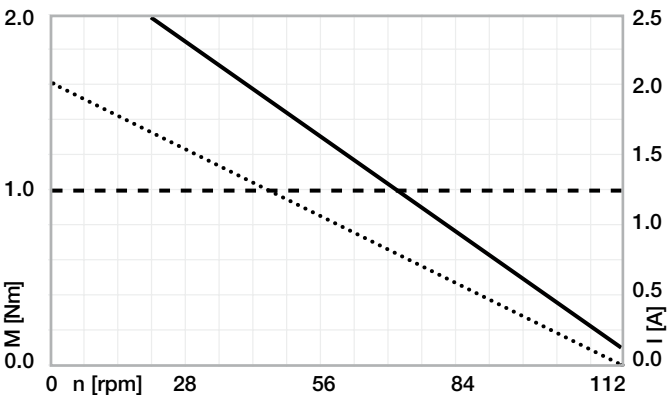
MOT-AE-B-024-001-037-F-A-AAAA / MOT-DC-37-M-A-A



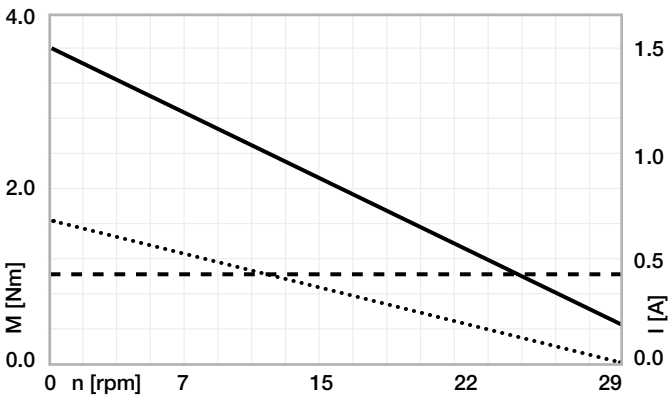
MOT-AE-B-024-003-037-F-A-AAAA / MOT-DC-37-M-A-B



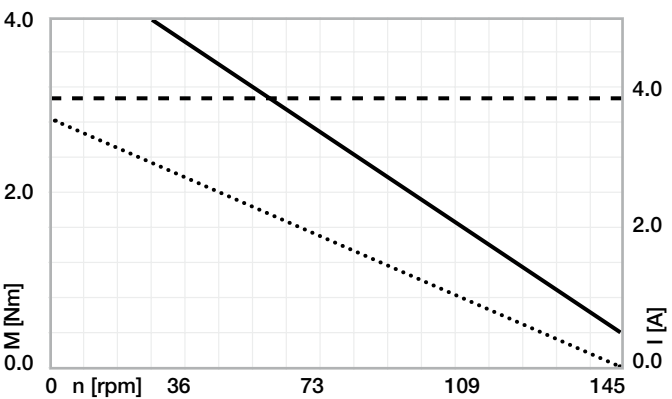
MOT-AE-B-024-005-036-F-A-AAAA / MOT-DC-36-M-A-D



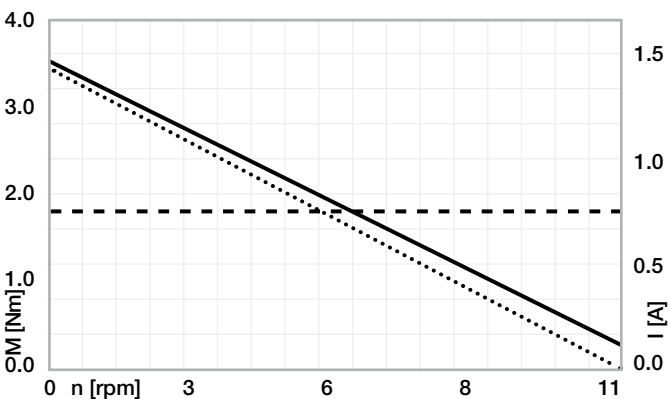
MOT-AE-B-024-007-037-F-A-AAAA / MOT-DC-37-M-A-D



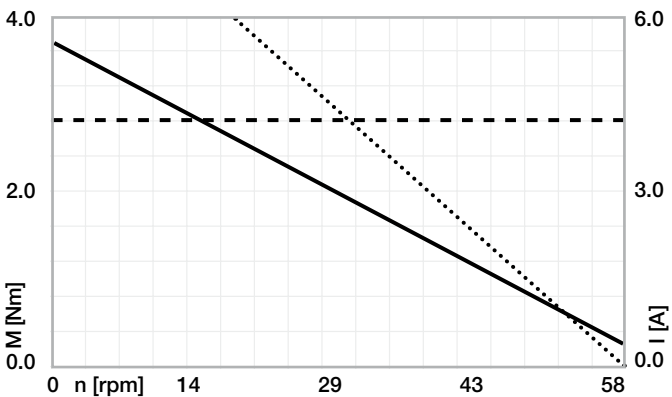
MOT-AE-B-024-010-042-F-A-AAAA / MOT-DC-42-M-A-D



MOT-AE-B-024-015-037-F-A-AAAA / MOT-DC-37-M-A-H



MOT-AE-B-024-018-042-F-A-AAAA / MOT-DC-42-M-A-F



Order key

MOT-DC-36-M-A-D

Product type: Motor
Motor type: DC motor
Outer diameter [mm]
M: Metric connectors M12
Options: A: Without
Rated speed [rpm]

Rated speeds

A: Ø37 = 350  
B: Ø37 = 112  
D: Ø36 = 190  
Ø37 = 47  
Ø42 = 252  
F: Ø42 = 96  
H: Ø37 = 17

----- Torque      ----- Max. continuous torque      — Motor current

# drylin® E | Accessories | Product range

## Coupling – vibration dampening and easy fitting



The coupling connects the drive pin of the axis to the motor. An elastic polymer insert in the centre of the coupling transfers the motor torque. This damping element compensates for radial and axial clearance.

- 20 versions from stock
- Vibration dampening and easy fitting

Coupling material: Aluminium. TPU elastomeric centre. Shore hardness: 98 Sh A. Temperature range –30°C to +100°C.

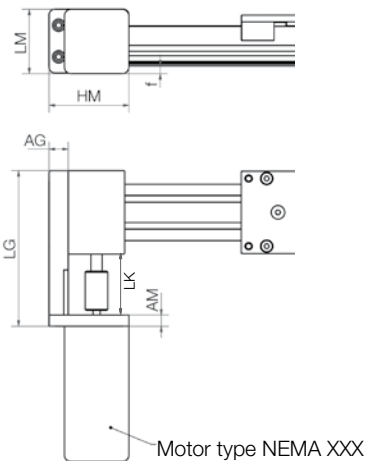
				Techn. data - coupling			
Toothed belt axis	Motor type	Coupling	D	di1	di2	L	Weight
				[mm]	[mm]	[mm]	[kg]
ZLW-0630-B	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	□6.00	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	□6.00	26.00	0.02
	DC motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	□6.00	26.00	0.02
ZLW-0630-S	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	NEMA23	COU-AR-K-063-080-25-26-B-AAAA	25.00	6.35	8.00	26.00	0.02
	DC motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
ZLW-1040-B / ZAW	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	□6.00	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	□6.00	26.00	0.02
	NEMA23XL	COU-AR-K-080-000-25-26-B-AAAB	25.00	8.00	□6.00	26.00	0.02
	DC motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	□6.00	26.00	0.02
ZLW-1040-S / ZAW	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	NEMA34	COU-AR-K-140-100-32-32-B-AAAA	32.00	14.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
ZLW-1660-S	NEMA 34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05
Lead screw axis	Motor type	Coupling	D	di1	di2	L	Weight
				[mm]	[mm]	[mm]	[kg]
SAW-0630 / SLW-BB-0630	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	DC motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
SAW-1040 / SLW-(BB)-1040	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SLW-(BB)-1660	NEMA23	COU-AR-K-063-140-32-32-B-AAAA	32.00	6.35	14.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-140-32-32-B-AAAA	32.00	8.00	14.00	32.00	0.05
SLW-(BB)-2080	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-12	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SHT-(BB)-20	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-30	NEMA34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05

# drylin® E | Accessories | Product range

## Motor flange kit for stepper and DC motors

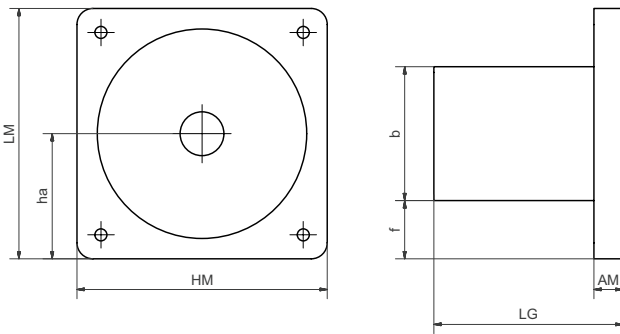


- 2 base plate lengths for each NEMA motor flange; others upon request
- Matches the drylin® coupling ► [Page 1440](#)



### Dimensions [mm]

Part No.	Matching linear modules	Base plate				Motor flange		
		AG	LG	LK	AM	HM	LM	f
MF-0630-NEMA17-S	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-0630-NEMA23-S	ZLW-0630	12	99.5	35.5	10	59	56	14
MF-1040-NEMA17-S	ZLW-1040	17	119	35	10	63	44	–
MF-1040-NEMA23-S	ZLW-1040	17	119	35	10	70.7	56.4	7
MF-1040-NEMA34-L	ZLW-1040	17	138	54	10	85	85	20.5
MF-1660-NEMA34-S	ZLW-1660	15	166	52	10	86	86	–
MF-2260-NEMA23-S	ZAW-1040	10	108	35	10	70.7	56.4	–
MF-0630-DC0310	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-1040-DC0310	ZLW-1040	17	119	35	10	63	44	–
MF-1040-DC0350	ZLW-1040	17	119	35	10	63	44	–



The motor flange, sometimes called motor enclosure, encloses and protects the coupling and provides the matching mounting dimensions for your NEMA motor.

- Matches the drylin® coupling ► [Page 1440](#)

### Dimensions [mm]

Part No.	Matching linear modules	LG	AM	HM	LM	b	f	ha
MF-1123-NEMA17	SAW/SLW-BB-0630	45	–	43	43	43	–	21.5
MF-2040-NEMA17	SAW/SLW-1040-AL, SHT-12	47	12	56	56	56	–	21.5
MF-2040-NEMA23-S	SAW/SLW-1040-AL, SHT-12/20	48	13	56	56	56	–	28
MF-3648-NEMA23	SHT-20, SHT-BB-20	56	13	56	56	56	–	28
MF-3648-NEMA34	SLW-1660/2080, SLW-BB-1660/2080	65	10	86	86	46	20	43
MF-3648-NEMA34-XL	SHT-30, SHT-BB-30	76	10	86	86	56	15	43
MF-1123-DC0310	SAW/SLW-BB-0630	45	–	43	43	43	–	21.5
MF-2040-DC0310	SAW/SLW-1040-AL, SHT12	47	12	43	43	43	–	21.5
MF-2040-DC0350	SAW/SLW-1040-AL, SHT12	47	12	43	43	43	–	21.5



# drylin® E | Accessories | Product range

## Connecting cables for NEMA stepper motors



The ideal complement to the drylin® E product range provides chainflex® connection cables.

- Suitable for energy chains
- Shielded and oil-resistant
- Straight and angled connectors

### Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part No.	Jacket	Type	Cable length [m]	Connectors
Motor cable (overmoulded)				
MAT9043737	TPE	CF9-CF.INI	3.0	straight
MAT9043738	TPE	CF9-CF.INI	5.0	straight
MAT9043740	TPE	CF9-CF.INI	10.0	straight
MAT9043742	TPE	CF9-CF.INI	3.0	angled
MAT9043743	TPE	CF9-CF.INI	5.0	angled
MAT9043745	TPE	CF9-CF.INI	10.0	angled
Encoder (harnessed)				
MAT90432594-3	PVC	CF240	3.0	straight
MAT90432594-5	PVC	CF240	5.0	straight
MAT90432594-10	PVC	CF240	10.0	straight
MAT90436430-3	PVC	CF240	3.0	angled
MAT90436430-5	PVC	CF240	5.0	angled
MAT90436430-10	PVC	CF240	10.0	angled

### Flange size 86 (NEMA34)

Part No.	Jacket	Type	Cable length [m]	Connectors
Motor cable (harnessed)				
MAT90439520-3	PUR	CF78.UL	3.0	straight
MAT90439520-5	PUR	CF78.UL	5.0	straight
MAT90439520-10	PUR	CF78.UL	10.0	straight
Encoder (harnessed)				
MAT90439519-3	PVC	CF211	3.0	straight
MAT90439519-5	PVC	CF211	5.0	straight
MAT90439519-10	PVC	CF211	10.0	straight

### Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part No.	Jacket	Type	Cable length [m]	Connectors
Brake cable				
MAT9043716	TPE	CF9-CF.INI	3.0	straight
MAT9043717	TPE	CF9-CF.INI	5.0	straight
MAT9043719	TPE	CF9-CF.INI	10.0	straight
MAT9043724	TPE	CF9-CF.INI	3.0	angled
MAT9043725	TPE	CF9-CF.INI	5.0	angled
MAT9043727	TPE	CF9-CF.INI	10.0	angled

# drylin® E | Accessories | Product range

## Proximity switches - limit and reference switches



### Technical data

Proximity switches	Unit	
Operating voltage	[VDC]	10...30
Max. trigger current	[mA]	100
Ambient temperature	[°C]	-25...+70
Trigger distance	[SN]	2.5
Protection class		IP67
Connectors		M8

20-30mm of extra stroke length is required for each limit reference switch.

Axis	Part No.	
	Proximity switch kit	
	N.C./normally closed N.O./normally open	
SAW-0630	IK-0001	IK-0002
SAW-1040	IK-0001	IK-0002
SAW-1660	IK-0003	IK-0004
SLW-BB-0630	-	-
SLW-BB-1040	IK-0006	IK-0017
SLW-BB-1080	IK-0007	IK-0018
SLW-BB-1660	IK-0008	IK-0019
SLW-BB-2080	IK-0009	IK-0020
SHT-BB-12	IK-0011	IK-0022
SHT-BB-20	IK-0012	IK-0023
SHT-BB-30	-	-
SLW-1040-AL	IK-0006	IK-0017
SLW-1080	IK-0007	IK-0018
SLW-1660	IK-0008	IK-0019
SLW-2080	IK-0009	IK-0020
SHT-12	IK-0011	IK-0022
SHT-20	IK-0012	IK-0023
SHT-30	-	-
ZLW-0630-B	IK-0001	IK-0002
ZLW-0630-S	IK-0001	IK-0002
ZLW-1040-B	IK-0001	IK-0002
ZLW-1040-S	IK-0001	IK-0002
ZAW-1040-B	IK-0001	IK-0002
ZAW-1040-S	IK-0001	IK-0002
ZLW-1660-S	IK-0003	IK-0004


The compact and easy assembly of the proximity switches represent a logical extension of the kit approach for the drylin® E range. The plastic housing makes the proximity switches, which can be used as limit, position or reference switches, particularly light and tough.


### Pin assignment

Proximity switch M8 3-pin		Proximity switch cable	
PIN	Signal	PIN	Colour
1	+	1	brown
3	-	3	blue
4	Load	4	black




Matching cables are added by including the following attachments:


**IK-0010-BG-3**




Cable length:  
3m, 5m, 10m



Connector description  
**BG:** straight socket



Assignment number



Proximity switch kit



A proximity switch kit for SAW & ZLW includes a proximity switch, a bracket and mounting screws

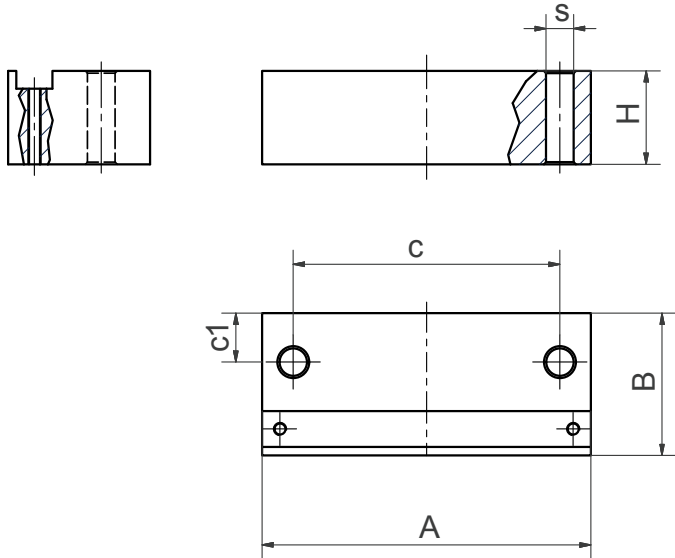


A proximity switch kit for SLW & SHT includes a proximity switch, two spacers and mounting screws.



The spacer is an aluminium standoff that brings the selected drylin® linear unit to a height that matches your NEMA stepper motor. An attachment feature for proximity switches is already integrated. Retro-fitting is also possible.

- Adapter kit contains 2 spacers for connection of a linear module



Part No.	Suitable for linear module
AK-0001	SLW-1040
AK-0002	SLW-1080
AK-0003	SLW-1660
AK-0004	SLW-2080
AK-0027	SHT-08
AK-0006	SHT-12
AK-0007	SHT-20
AK-0008	SHT-30
AK-0009	SLW-25120

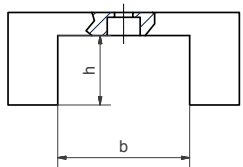
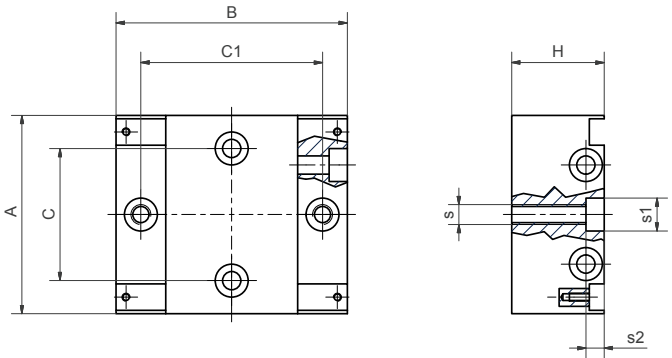
Dimensions [mm]

Part No.	A	B	H	c ±0.1	c1	Ø s +0.2
AK-0001	74	32.0	21.0	60	11.0	6.2
AK-0002	108	32.0	21.0	94	11.0	6.2
AK-0003	104 -0,2	35.0	24.5	84	12.5	8.1
AK-0004	134	38.0	20.0	116	14.0	9.0
AK-0027	65	25.5	13.0	52	7.75	5.5
AK-0006	85	40.0	17.5	70	15.0	6.2
AK-0007	130	46.0	22.0	108	18.0	10.5
AK-0008	180	60.0	10.0	150 ±0.2	25.0	13.5
AK-0009	200	45.0	16.0	173 ±0.2	17.5	13.5



For the assembly of drylin® ZLW toothed belt axes

- Available for drylin® WSX/SAW(C)/ZLW  
Sizes 0630/1040/1080/1660
- Material: anodised aluminium
- Connection options: T-slots profile, linear axis/  
initiators
- Freely positionable
- Quick assembly without holes
- Including roll-in slot nuts and screws for fastening



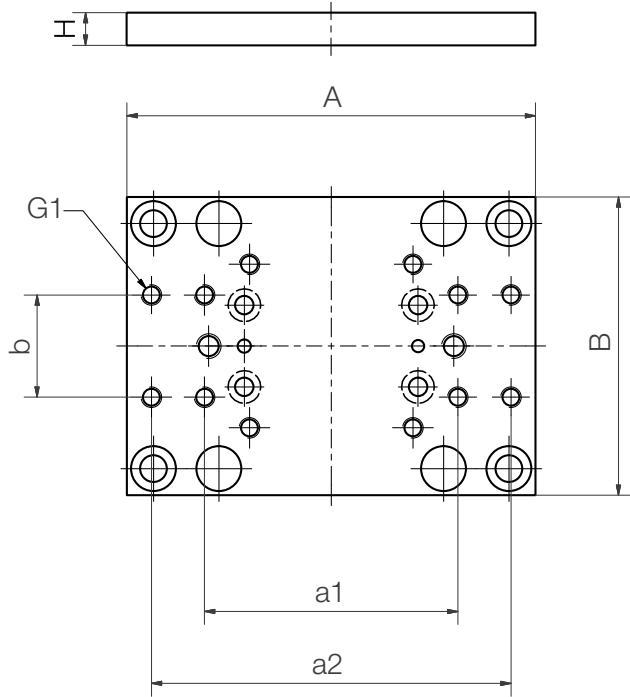
Part No.	Suitable for		
	Rail profile	Linear module	Toothed belt axis
AK-0037	WSX-06-30	SAW(C)-0630	ZLW-0630
AK-0038	WSX-10-40	SAW(C)-1040	ZLW-1040
AK-0039	WSX-10-80	SAW-1080	ZLW-1080
AK-0040	WSX-16-60	SAW-1660	ZLW-1660

Dimensions [mm]

Part No.	A	B	H	h	b	C	C1	s	s1	s2
AK-0037	60	70	20	12	30	40	50	M6	Ø10	5.5
AK-0038	60	70	28	21	40	40	55	M6	Ø10	5.5
AK-0039	60	104	28	21	74	40	90	M6	Ø10	5.5
AK-0040	60	98	47	37	62	40	80	M8	Ø11	27



- Simple and fast multi-axes linear robot setup
- For lead screw and toothed belt axes
- Energy chain assembly preparation
- Anodised aluminium
- Space and weight-saving
- Mounting of y-axis on 2 x-axes



Mounting of y-axis on two x-axes

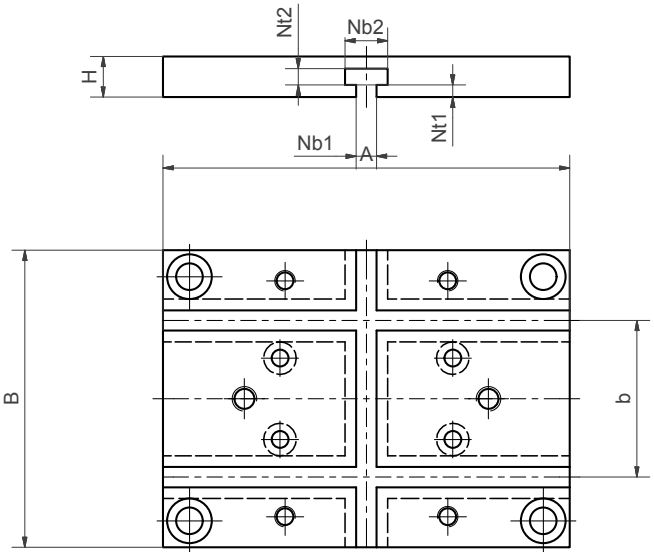
Part No.	x-axis	y-axis	Function linear robot setup
AK-0011	ZLW-0630, 100mm carriage	ZLW-0630, ZLW-1040	Assembly y-axis
AK-0012	ZLW-1040, 100mm carriage	ZLW-0630, ZLW-1040	Assembly y-axis
AK-0013	ZLW-1040, 150mm carriage	ZLW-0630, ZLW-1040, ZLW-1080	Assembly y-axis
AK-0014	ZLW-1660, 250mm carriage	ZLW-1040, ZLW-1080	Assembly y-axis
AK-0024	ZLW-1040, 200mm carriage	ZLW-0630, ZLW-1040, ZLW-1080	Assembly y-axis
AK-0025	ZLW-1080, 150mm carriage	ZLW-0630, ZLW-1040, GRW-0630	Assembly y-axis

Dimensions [mm]

Part No.	A -0.3	B -0.3	G1	H	a1	a2 +0.2	b
AK-0011	100	54	M5	13	62	88	25
AK-0012	100	73	M5	8	62	88	25
AK-0013	150	73	M5	8	112	138	25
AK-0014	250	104	M5	10	–	232	35
AK-0024	200	73	M5	8	162	188	25
AK-0025	150	107	M5	8	112	138	25



- Anodised aluminium
- Various fixing options
- Can be retrofitted
- For XY linear robot structures
- Suitable igus® slot nuts available ► Page 1448



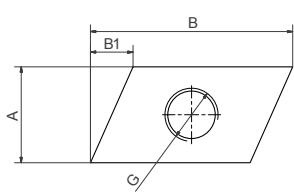
Variable T-slot mounting plates

Part No.	Base axis	Axis to be mounted
AK-0021	SAW-1080, 100mm carriage	ZLW/SAW-0630, ZLW/SAW-1040, GRW-0630
AK-0022	SAW-1040, 100mm carriage	ZLW/SAW-0630, ZLW/SAW-1040, GRW-0630
AK-0023	SAW-1660, 150mm carriage	ZLW/SAW-1040, ZLW/SAW-1080, ZLW/SAW-1660

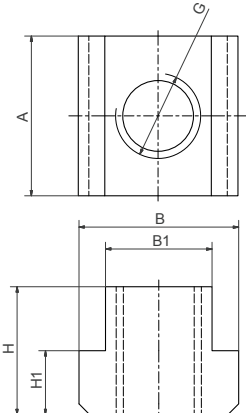
Dimensions [mm]

Part No.	A -0.3	B -0.3	H	b	Nb1 +0.2	Nb2	Nt1	Nt2 +0.2
AK-0021	100	107	10	42.5	5	10.5	3	4
AK-0022	100	73	10	38.5	5	10.5	3	4
AK-0023	150	104	10	42.5	5	10.5	3	4

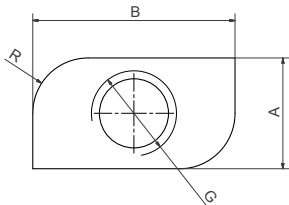




NOR-20602



NOR-20605



NOR-20613

For the drylin® W high-profile rail, slot nuts offer variable ways of fastening sensors and proximity switches, for example. The robust profile rail is the basis of SAW linear modules as well as ZLW toothed belt axes and has up to 5 T-slots for mounting slot nuts. Moreover, slot nuts are used as a fastening option in the case of drylin® Q linear carriages. Roll-in slot nuts are available for retrofitting in closed T-slots.

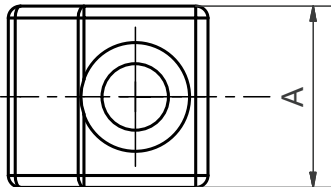
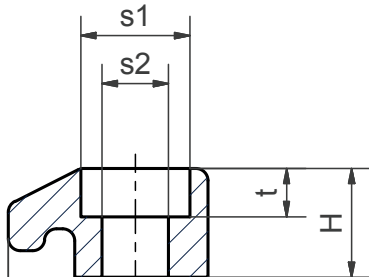
- Variable positionable
- Ideal for drylin® limit and reference switches
- Suitable for T-slots of the drylin® WSX high-profile rail
- Secure retention
- Can be retrofitted

Part No.	Suitable for Rail profile	Linear module
NOR-20602	WSX-06-30	SAW-0630, SAWC-0630, ZLW-0630
NOR-20602	WSX-10-40	SAW-1040, SAWC-1040, ZLW-1040
NOR-20602	WSX-10-80	SAW-1080, ZLW-1080
NOR-20602	AWMQ-12/20	QWE-01-12, QWE-01-20
NOR-20602	WSX-16-60	SAW-1660, ZLW-1660 (side slots)
NOR-20605	WSX-16-60	SAW-1660, ZLW-1660 (bottom slot)

Dimensions [mm]

Part No.	A	B	B1	H	H1	G	R
NOR-20602	9	19	4	4	–	M5	–
NOR-20605	15	15	10	12	6	M8	–
NOR-20613 <sup>132)</sup>	5.2	9.5	–	4	–	M4	2.5

<sup>132)</sup> Optionally available: roll-in slot nut for retrofitting



Fixing clamps offer a safe fastening of the drylin® linear axes on aluminium profiles. Designed for the drylin® W high-profile rail, the clamps can be inserted into the slots of the rail and used to fix the axis in place.

- Secure mounting
- Variable positionable
- For drylin® SAW linear modules and ZLW toothed belt axes
- For drylin® WSX high-profile rails


Part No.	Suitable for toothed belt axis
ZTZ-063006	ZLW-0630
75.40 ZLW	ZLW-1040
75.40 ZLW	ZLW-1080
75.50 ZLW	ZLW-1660

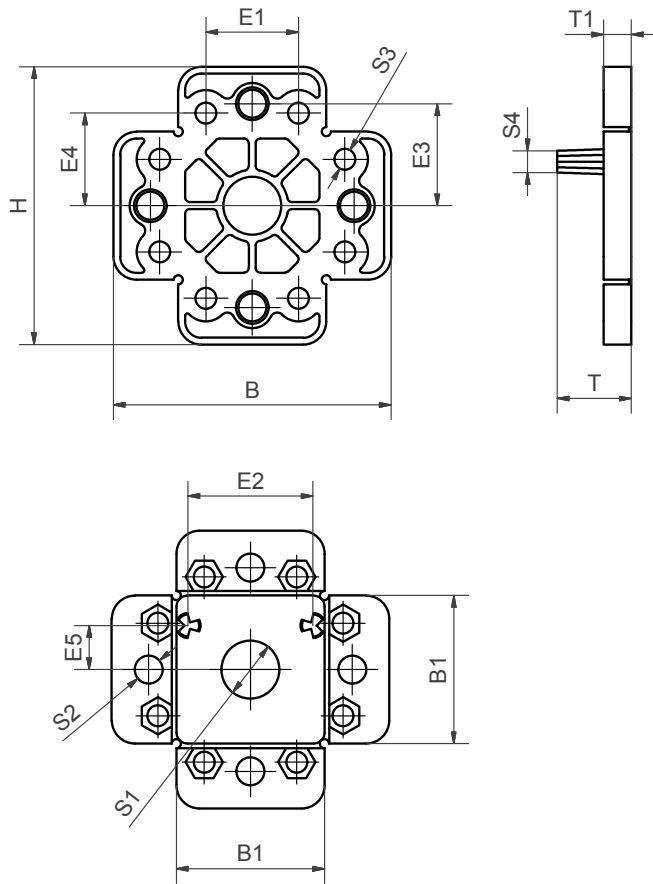
Dimensions [mm]

Part No.	B	A	H	X	s1	s2	t
ZTZ-063006	16.5	15	9	6	9	5.5	4
75.40 ZLW	27.65	40	8.7	8.6	–	6.4	–
75.50 ZLW	37.25	40	14.4	11	–	9	–



- Adapter plate for manual orientation of position indicators and manual clamps
- Suitable for drylin® linear modules of the SLW/SHT/SHTP series
- Material: Plastic

 **Installation note:** Unused sections can be easily separated.

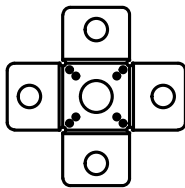


Part No.	Suitable for linear module
STZ-063008	SLW-0630/SHTP-06
STZ-104001	SLW-1040/SHT-12 SHT-20,SHTP-01/02-12
STZ-166001	SLW-1660
STZ-208001	SLW-2080, SLW-25120
STZ-302403	SHT-30

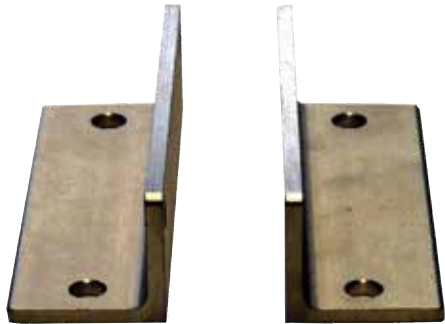
Dimensions [mm]

Part No.	H	B	B1	T	T1	E1	E2	E3	E4	E5	S1	S2	S3	S4
STZ-063008	48	48	18	8	5	–	14.4/11 <sup>106)</sup>	18	–	7.2/5.5	8.5	6	–	Ø1.5
STZ-104001	60	60	32	16	6	20	27	22	20	9.5	12.5	6	4.5	M6
STZ-166001	60	71	32	20	6	20	58	22	20	4.5	14.5	6	4.5	Ø11
STZ-208001	60	71	32	16	6	20	58	22	20	13	14.5	6	4.5	M10
STZ-302403	60	60	32	16	6	20	27	22	20	9.5	14.5	6	4.5	M6

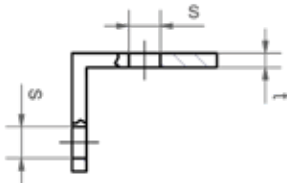
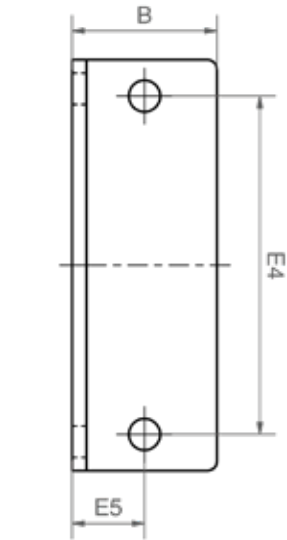
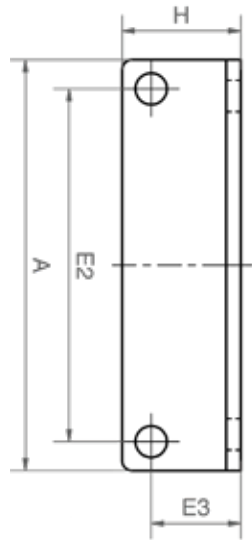
<sup>106)</sup> Adapter plate with 8 pins



Position indicators and lead screw clamps available ► Page 1424

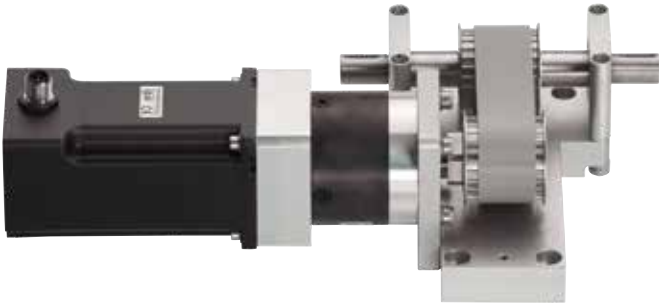


- drylin® SHT-WS is an angle kit for the SHT linear modules series. Stainless steel angle brackets make any XY-table combination possible.
- 2 different sizes
  - Can be combined with all drylin® linear modules series SHT/SHTC/SHTS with sizes 12 and 20

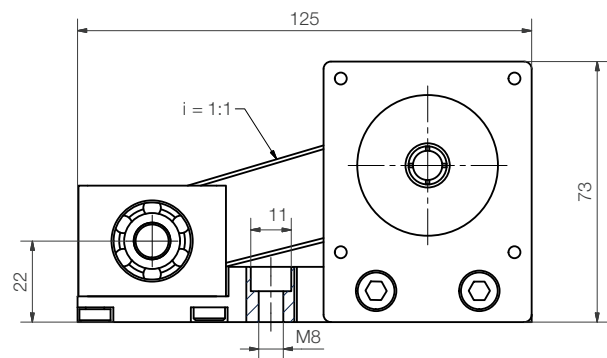
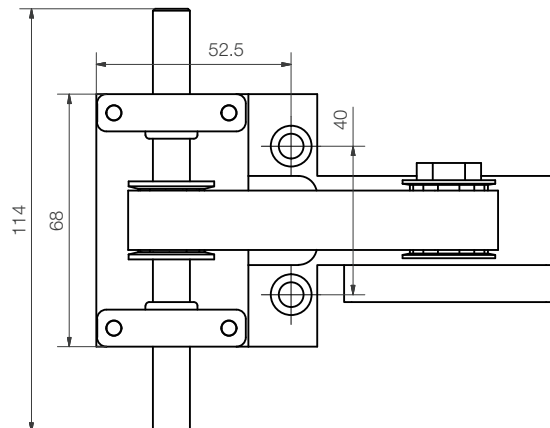


Dimensions [mm]

Part No.	A	H	B	E2	E3	E4	E5	s	t
SHT-WS-12	85	26.5	30	73	20.5	70	15	6.5	3
SHT-WS-20	130	36	35	108	18	115	35	8.5	5



- Connection of NEMA stepper motors in linear robot structures
- Space-saving
- More safety due to encoder and brake



### Dimensions [mm]

Part No.	Installation size	Motor	Design
GD-0001	1	NEMA23	Stranded wire
GD-0002	1	NEMA23	Connectors
GD-0003	1	NEMA23	Encoder
GD-0004	1	NEMA23	Encoder and brake
GD-0005	1	NEMA23XL	Stranded wire
GD-0006	1	NEMA23XL	Connectors
GD-0007	1	NEMA23XL	Encoder
GD-0008	1	NEMA23XL	Encoder and brake